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CENTRUL DE TRACOLOGIE

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Photo on the cover: bronze bracelet from grave 210 from Stelnica – *Grădiştea Mare* cemetery (Ialomiţa Co., Romania).

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THRACO-DACICA

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ANTHROPOLOGICAL ANALYSIS OF THE HUMAN OSTEOLOGICAL REMAINS DISCOVERED IN THE TUMULAR CEMETERY FROM CERNAVODĂ – A2 HIGHWAY (TUMULI NOS. 7, 7A, 7B)

ANGELA SIMALCSIK,
ROBERT-DANIEL SIMALCSIK

Keywords: tumular necropolis, Cernavodă, Early Bronze Age, paleodemography, paleopathology.

Abstract: The paper proposes an anthropological analysis of the skeletons digged out from three tumuli discovered on the Cernavodă-Medgidia segment of highway A2 (district of Constanţa), investigated archaeological in the year 2011 (tumuli 7, 7A and 7B). The tumular necropolis was dated on the basis of the archaeological inventory in the Early Bronze Age. Archaeological diggings produced 10 human skeletons, most of them preserved quite well, thus permitting a thorough anthropological analysis. The osteological material was analysed anthropometrically, demographically and paleopathologically. Special attention was paid to the bones anomalies and pathologies capable of providing clues on the daily activities as well as on the health condition of the subjects, all these aspects contributing to establish the lifestyle of the community under investigation.

Cuvinte cheie: necropola tumulară, Cernavodă, epoca bronzului timpuriu, analiza demografică şi paleopatologică.

Rezumat: Lucrarea prezintă analiza antropologică a scheletelor deshumate din trei tumuli descoperiţi pe tronsonul Cernavodă-Medgidia (jud. Constanţa) al autostrăzii A2 şi cercetaţi arheologic în anul 2011 (tumulii 7, 7A şi 7B). Necropola tumulară a fost datată pe baza inventarului arheologic în epoca bronzului timpuriu. Săpăturile arheologice au scos la lumină 10 schelete umane, majoritatea aflate într-o stare de conservare satisfăcătoare, astfel încât s-au pretat unei analize antropologice amănunţite. Materialul osteologic a fost studiat din punct de vedere antropometric, demografic şi paleopatologic. O atenţie deosebită a fost acordată anomaliilor şi patologiilor osoase care pot oferi indicii asupra activităţilor cotidiene şi asupra stării de sănătate, toate aceste aspecte ajutându-ne la conturarea stilului de viaţă al comunităţii studiate.

Introduction

The tumular necropolis is situated in the South-East part of Romania, more precisely South Dobrudja – one of the richest provinces in archaeological and historical vestiges. Geographically, the territory belongs to the Plateau of South Dobrudja, characterized by a steppe and forest steppe bioclimate. Extended archaeological investigations have been initiated in 2010, concurrently with the initiation of work at the A2 Highway (Constanţa-Cernavodă), when several funeral complexes (tumuli) have been discovered. Administratively, the zone under investigation belongs to the district of Constanţa, village Peştera, not far from the town of Medgidia. Nowadays, the estimated[1] number of tumular structures of various sizes is around 20. The first tumulus (no. 3), analysed in the year 2010, provided especially interesting results, being rich in archaeological remains; the results obtained by specialists have been published[2] in 2011 in an interdisciplinary volume.

The osteological material analyzed in the present study comes from tumuli nos. 7, 7A and 7B. These three funeral complexes have been investigated in the autumn of 2010 by archaeologists Alexandru Morintz, Andrei Măgureanu and Cristian Ştefan, under the coordination of Christian Schuster from the "Vasile Pârvan" Institute of Archaeology of Bucureşti[3]. The exhumed skeletons belong to persons buried with an E-V or S-N orientation, flexed on either left or right side, or stretched on their back. Based on the inventory discovered in the three tumuli, the authors of the excavations assert[4] that the chronological period to which the tumular necropolis might belong is Early Bronze Age.

[1] Schuster *et al.* 2011.

[2] *Ibidem.*

[3] The archaeologists who excavated the human skeletons entrusted us with the osteological material and offered complete information on the archaeological context. The authors are grateful for their most kind support and collaboration.

[4] Morintz *et al.* 2012.

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Materials and working methodology

The human osteological material investigated here is represented by 10 skeletons, of which five are males, three females and two – belonging to the *infans I* (0-7 years) group – of non-determinable sex. These 10 skeletons belong to the tumular necropolis of Cernavodă, being exhumed from tumuli nos. 7 (five skeletons), 7A (three skeletons) and 7B (two skeletons). The osteological material is well-preserved (in a ratio around 70%), thus permitting a minute anthropometric and morphoscopic analysis.

The anthropological study began with the restoration and marking of the osteological remains, after which morphoscopic examination and collection of anthropometric data followed. Determination of sex and age at death was followed by conformative and morphoscopic analysis, and investigation of the pathologies, anomalies and epigenetic characters. At the individuals deceased before the age of 20 (*infans I*, *infans II* and *juvenis*), the determination of age at death was based on their dental evolution[5], on the concrescence extent of epiphyses at the diaphyses of the postcranial bones, and on the length of the bones of the appendicular skeleton, *versus* the length standards of the long bones, established from measurements taken as early as the intrauterine stage[6]. Determination of the age at death for subjects older than 20 years (*adultus*, *maturus* and *senilis*) considered the modification of the pubic symphyseal surface and of the auricular surface of the ilium, the aspect of the spongious tissue in the bones of the appendicular skeleton, the cranial suture closure, the tooth wear, and the existence of certain pathological processes associated with advanced age[7]. For sexual diagnosis, the following complex of characters was considered: general shape of the pelvis, size and openness of the greater sciatic notch, the appearance of the sacrum, robustness of the skeleton, development of muscular joints and insertions, cranial relief, forehead shape and leaning degree, robustness and shape of the mandible[8].

Individual osteological analysis provided information on the basis of which some anthropometric, conformative and somatoscopic characteristics could be subsequently established from the values of direct measurements, and also from the calculation of the conformation indices[9]. Evaluation and categorization of the absolute and relative values made use of the dimorphic scales of Alexeev and Debetz[10]. The somatoscopic and morphological observations were registered and analyzed with the methods recommended by Broca, von Eickstedt and Olivier[11]. The probable stature of each individual was calculated from the lengths of the long bones of the superior and inferior members. The dimensional scales proposed by Manouvrier, Bach, Breitinger, Trotter, Gleser were also employed[12].

There were also analysed skeletal particularities viewed in the literature as functional adaptations and occupational or life style markers, or mechanical enthesopathies, as follows: markers of aquatic activities (auditory exostoses or torus), markers of equestrian activities (presence of the femoral pilaster and hypotrochanteric spur, presence of enthesopathies on *linia aspera*, presence of supplementary femoral trochanter and Poirier's facet), markers of hard work activities (femoral and tibial diaphyseal shape, platymeric index, platycnemic index, degree of development of the humeral deltoid insertion, development of bone relief and of the muscular insertions, frequency of the supratrochlear foramen of the humerus, frequency and localization of the squatting facets on the talus and tibia).

The epigenetic cranial and postcranial characters, called non-metric or discrete, and appreciated by several specialists as carrying a high biological significance and (at least some of them) a high heritability, their determinism being dictated by both environmental[13] and hereditary[14] factors were also included in the category of anomalies. In the end, the presence of osteopathies and osteoanomalies was calculated per sex group, as well as reported at the entire population. Their identification and also estimation of the development extent were based on the methods, criteria and techniques recommended by specialists[15].

The demographic analysis was also considered important and useful for establishing the size of the social group under study, as well as for a socio-economic characterization of the community and

[5] Ubelaker 1987, 1254-1263.

[6] Maresh 1955, 725-742; Schaefer *et al.* 2009.

[7] Ferembach *et al.* 1979, 7-45; Schmitt 2005, 1-13.

[8] Buikstra, Ubelaker 1994; Walrath *et al.* 2004, 132-137; Blanchard 2010.

[9] Martin, Saller 1956-1966.

[10] Alexeev, Debetz 1964.

[11] Broca 1875, 1-204; Von Eickstedt 1934; Olivier 1969.

[12] Manouvrier 1892, 227-233; Bach 1965, 12-21; Breitinger 1938, 249-274; Trotter, Gleser 1958, 79-123.

[13] Piontek 1979, 95-110; *idem* 1988, 321-327; Bergmann, Hauser 1985, 165-171; Kaur *et al.* 2012, 189-194.

[14] Sjøvold 1984, 223-246; Rubini 1997, 454-462.

[15] Slootweg 2007; Waldron 2009; Ortner 2003; Aufderheide, Rodriguez-Martin 1998.

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estimation of its health condition. The paleodemographic study of the population exhumed from the tumular necropolis of Cernavodă involved a particularly careful investigation of the characters indicating the sex and age of the 10 human skeletons, the more so that, statistically, the size of the group is quite reduced. No cases preventing determination of the age at decease or, in the case of adults, of sex, were encountered. The demographic data of the skeletal series under analysis (tumuli nos. 7, 7A and 7B) were compared[16] with those collected for the synchronous skeletal series exhumed from tumulus no. 3 of the same complex at Cernavodă. The following demographic indices were considered: mean life duration/life expectancy at birth, general and infantile mortality, structure on sexes and structure on ages[17].

Tumulus no. 7 – Grave no. 1 (T_7, G_1)

The skeleton is incomplete as the cranial bones could not be restored due to advanced fragmentation and alteration owed to pedological factors. The postcranial skeleton, also incomplete, included the following pieces: three rib fragments, the left clavicle, a fragment of the right coxal bone (from the sciatic notch region), the humeri, the ulnae and fragments of radial diaphyses, and fragments of the femora, tibiae and fibulae. This very gracile skeleton belonged to a ***female*** subject, approximately 40-45 year-old (***maturus*** category). Some of the bone remains show slight reddish (ochre) traces, randomly distributed on the external bone wall of the humeri and femora.

The mandible (table 1). The only preserved part was the masticatory portion of the left horizontal and left vertical ramus. Even if considerably altered by the soil, its gracefulness is still obvious. The vertical ramus is large and short, while the relief at the *gonion* is attenuated, in the same plane with the horizontal ramus.

Dentition was analysed based on the three molars present in alveoli on the inferior left hemiarch, and also according to other three teeth found among the other bone remains, detached *post mortem*: inferior left P1, inferior left P2 and inferior left C. All six teeth are highly attrited (III-IV degree). No evidence of caries.

The postcranial skeleton (table 2) is gracile, typically feminine. The postcranial bones were fragmented during cleaning, which prevented any measurements. However, some observations could be made. The femora, apart from a small subtrochanteric relief, had a quite obvious pilaster for a woman, the *linia aspera*, also defined as the femoral rough line. A prominent and rugged *linia aspera* indicates over-stress of the group of muscles inserted in these locations, and is also an indicator of equestrian activities[18].

Pathologies, anomalies, epigenetic traits

The left side of the frontal bone evidences a ***complete supraorbital foramen*** (fig. 1) – which is a good marker for the climatic conditions in which the subject had lived – in our case, a cold and humid climate[19].

The right humerus has a ***supratrochlear foramen*** (fig. 2) – indicating hypermobility of the arm, namely repetitive flexion-extension movements[20].

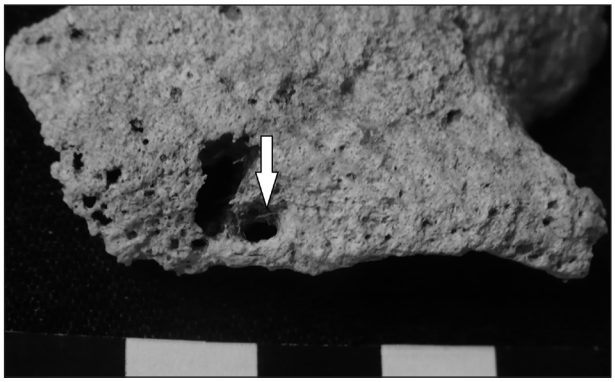

Fig. 1. T_7, G_1, ♀, 40-45 Y. O. Frontal, complete supraorbital foramen.

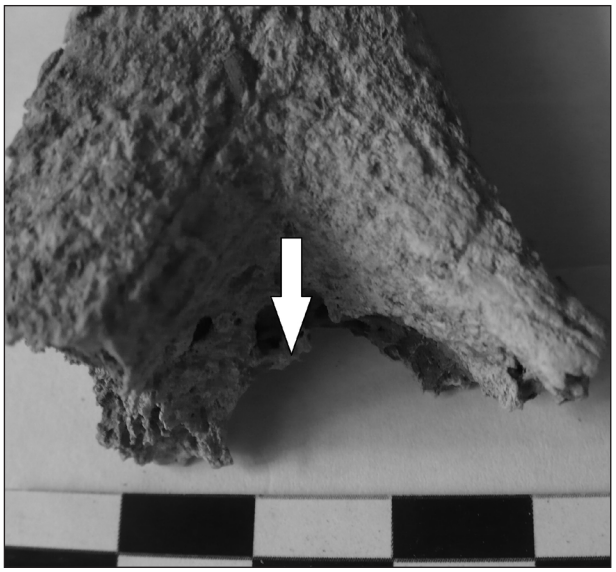

Fig. 2. T_7, G_1, ♀, 40-45 Y. O. Right humerus, supratrochlear foramen.

[16] Schuster *et al.*, 2011.

[17] Hoppa, Vaupel 2002; Chamberlain 2006.

[18] Blondiaux 1994, 97-110; Molleson, Blondiaux 1994, 312-316.

[19] Tomaszewska *et al.* 2013, 58-70.

[20] Nayak *et al.* 2009, 90-64.

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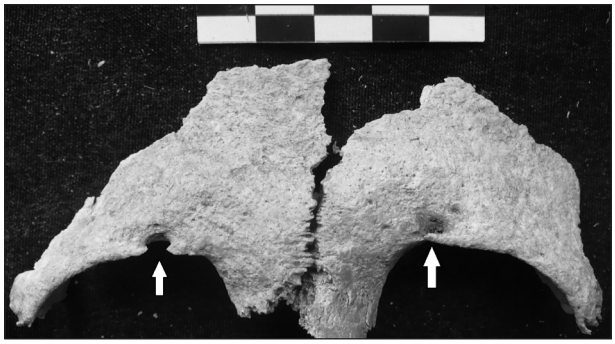

Fig. 3. T_7, G_2, ♀, 55-60 Y. O. Left side – supraorbital complete foramen, right side – supraorbital notch.

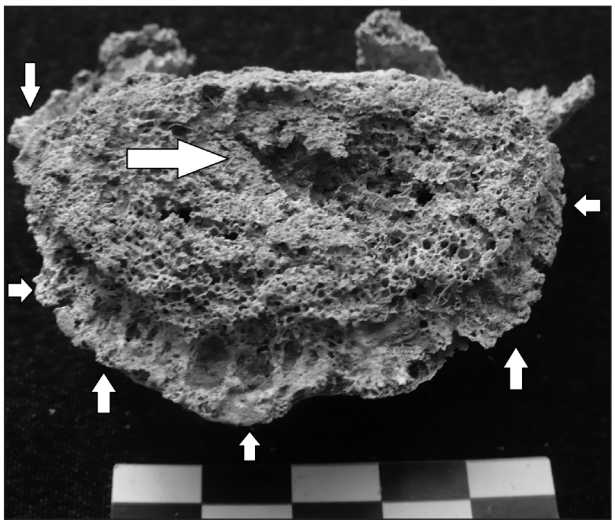

Fig. 4. T_7, G_2, ♀, 55-60 Y. O. L_5 vertebra showing osteophytes and Schmorl's node.

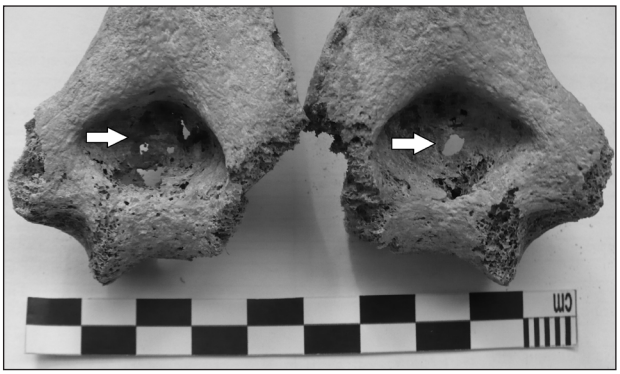

Fig. 5. T_7, G_2, ♀, 55-60 Y. O. Supratrochlear foramen of the humeri.

Tumulus no. 7 – Grave no. 2 (T_7, G_2)

The osteological remains of this skeleton are precariously conserved. The skull is represented by fragments of the frontal, parietal, temporal, occipital, zygomatic and upper maxillary bones. The mandible is intact. The considerable fragmentation and the numerous absent parts prevented skull restoration. The postcranial skeleton, even if fragmented, is represented by all bones of the superior and inferior members and by almost all girdles bones. The spine, hardly represented, includes only the axis and a few, highly fragmented dorsal and lumbar vertebrae. The skeleton is quite gracile, whereas the density of the bone tissue is low. The remains belonged to a ***female*** subject with the age at death around 55-60 years (***maturus*** category).

The neuroskull (table 1). Apparently, the forehead was medium to small, and the occipital – slightly convex (average curvature) and of reduced height. The bone relief is weakly developed, both on the frontal and on the occipital bone (glabellar 2, supraorbital 1, external occipital protuberance 1-2), and on the mastoid process (degree 2-3).

The facial skeleton (table 1). The zygomatic bones are narrow, the pyriform aperture is anthropine.

The mandible (table 1), typically feminine, is especially gracile, with reduced width and depth values. The horizontal ramus is moderately high and very narrow/thin, the vertical one is narrow and high, the mentonier region shows a button aspect, while the goniac relief is attenuated, in plane with the horizontal branch. The robustness index is very low.

Dentition shows neither caries nor other infectious processes, the loss of teeth occurring only *post mortem*. Dental wear is especially advanced: in the jugal area – of the IVth degree, in the masticatory one – degree IV or even V. The dental crowns are almost completely eroded, and dentin is exposed. Deposits of supragingival dental calculus should be also mentioned.

The postcranial skeleton (table 2), quite precariously preserved because of advanced fragmentation, is gracile. The femora are asymmetrical from the point of view of platymeric and pilaster indices: the right femur is platimer, with a small pilaster, the left one is hyperplatimer without a pilaster. The subtrochanteric relief has a crest and a fossa. Unlike the femora, the tibiae are symmetrical, giving a mesocnemic-type index. The humeri, asymmetrical by the index of the diaphysary section, belong to the platybrachic (the left) and eurybrachic (the right one) category, with a weakly-pronounced deltoidian relief, showing a supratrochlear foramen.

Pathologies, anomalies, epigenetic traits

All teeth present in the alveolus, as well as the ones detached *post mortem*, show a thin layer of ***supragingival calculus/tartar*** – a mineralized bacterial plaque. There are no caries present on teeth.

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The mastoid apophyses show an ***exsutural mastoid foramen*** – a characteristic useful for establishing the extent of endogamy[21].

The left supraorbital region has a ***complete supraorbital foramen***, while the right one shows a ***supraorbital notch*** (fig. 3) – both characteristics providing suggestions on the climatic conditions under which the analyzed subject had lived – a cold and humid climate[22].

In the postcranial segment, the female skeleton presents numerous signs indicating ***degenerative osteoarthritis*** – a disease of the joints, associated with advanced age and hard labour, constantly involving the backbone and the musculature.

In this case, most of the bones of the inferior and superior members are affected, as well as some bones of the scapular girdle (the clavicles) and the spine, the last one being represented only by a few fragmented pieces, among which the body of L_5 vertebra. Some bone excrescences were observed on the bones of the members: osteophytes in the areas of the joints, and enthesophytes in the areas of muscular insertion. Osteophytes had been formed on the vertebral bodies as a result of bone pressure or friction, caused by the different forms of stress exercised on the bone surface and maintained for a long time[23]. Apart from osteophytes, the vertebral bodies also show Schmorl's nodes (fig. 4), their presence indicating that the woman developed activities which over-stressed her backbone, being also a sign of some degenerative diseases of vertebral disc associated with advanced age.

The humeri evidence a ***supratrochlear foramen*** (fig. 5) – which is a result of either hypermobility or/and clumsiness[24].

A feature observed on the anterior margin of the distal extremity of the tibiae is the additional joint facets – ***squatting facets***, which may provide direct information on the habit of staying in crouched position during daily work[25].

Another important characteristic to mention is the ***preauricular sulcus,*** which may appear as a traumatic result of child birth upon the coxal bones. In this case the sulcus is of "grooves of pregnancy" type[26].

[21] Tomaszewska *et al., op. cit.*

[22] *Ibidem*.

[23] Duthie, Bentley 1983.

[24] Singhal, Rao 2007, 105-107; Mahajan 2011, 128-132.

[25] Satinoff 1972, 209-212.

[26] Kurihara *et al.* 1996, 1037-1040.

Tumulus no. 7– Grave no. 3 (T_7, G_3)

The skeletal remains of this subject, very well preserved, are represented by an almost complete *cranium* (only the nasal region is absent), which had to be restored, and a postcranial skeleton including almost all bones of the members, girdles and vertebral column. Mention should be made of the absence of the left radius and of the calcanei. This extremely robust skeleton, in both its cranial and post-cranial region, belonged to a ***male*** subject with age at death of 18-20 years (***juvenis*** category).

The neuroskull (table 1). The form of the neurocranium, in *norma verticalis*, is ovoid, while, in *norma occipitalis* is of "house"-type. The cranial vault is very long, high and moderately large. The cephalic index is dolichocranic, at the superior limit of the category, whereas the poriobregmatic longitudinal and transversal indices place the skull in the ortochrane and metriochrane categories. The vertical contour indicates a leaning forehead, a long, hardly-arched line of the crown and a high, convex occipital. The forehead is eurimetopic and oval, with crests of intermediary type. The occipital bone is medium large. The bone relief is very well pronounced on the frontal bone (glabellar 3, supraorbital 2), moderate on the occipital bone (1-2) and very pronounced on the mastoid process (degree 5).

The facial skeleton (table 1). The zygomatic bones are large-sized, with pronounced relief, considerable height, and at an intermediary position *versus* the temporal bones. The piriform aperture is of anthropine type. The palatine vault shows a paraboloid convergent contour and median depth.

The mandible (table 1), although typically masculine and very robust, has medium width and depth. The horizontal ramus shows small height and medium thickness, while the vertical one – moderate height and width. The mentonier region is pyramidal and prominent, and the goniac relief is attenuated, at the same level with the horizontal ramus. The index of mandibular robustness is high.

Dentition seems to have been intact during life, the loss of some teeth having occurred only *post mortem*. The degree of dental wear is very low (I-II), with some incipient traces of enamel erosion on the primary masticatory teeth. Molars 3 erupted shortly prior to the death. Mention should be made of the total absence of caries, of infectious processes and of the calculus.

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Fig. 6. T_7, G_3, ♂, 18-20 Y. O. Left orbital roof showing possible osteoid osteoma.

Fig. 7. T_7, G_3, ♂, 18-20 Y. O. Congenital rib fusion, bilateral.

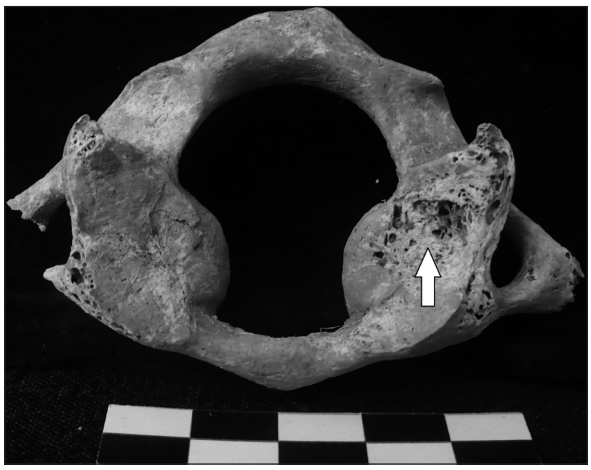

Fig. 8. T_7, G_3, ♂, 18-20 Y. O. Atlas. Corrosion (secondary osteoarthritis).

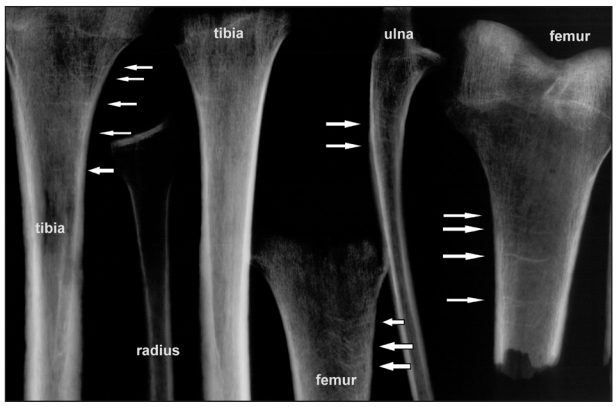

Fig. 9. T_7, G_3, ♂, 18-20 Y. O. Harris lines (tibia, femur, radius and ulna).

The postcranial skeleton (table 2) is extremely robust. The femora are platimere, with no pilaster. The subtrochanterian relief was observed only at the left femur, which is moderately developed, represented by the crest, fossa and additional trochanter – markers of equestrian activities (horseback riding)[27]. The tibiae are platycnemic, having additional joint squatting facets.

The stature (table 2), calculated in good conditions, from the bones of both the superior and inferior members, belongs to the supra-medium male category, at its upper limit.

Pathologies, anomalies, epigenetic traits

On the lambdoid suture of the skull, mention should be made of eight ossicles, three on the left side and five on the right one, known in the literature as ***Wormian bones*** or intersutural bones – representing ossification anomalies with a high degree of heritability. In our case, the Wormian bones show moderate to small sizes.

On the left superior orbitary wall, a circular unevenness, about 0.7-0.8 cm in diameter, may be observed (fig. 6); it is probably an ***osteoid osteoma*** – a small-sized benign tumoral bone formation, usually asymptomatic, frequently occurring in children, adolescents and young adults[28].

The left supraorbitary region shows a ***supraorbitary notch*** – a marker for the cold and moisty climatic conditions[29].

This juvenile man also shows a congenital malformation that is rarely present either in the osteological collections or at present – ***rib fusion*** (fig. 7). Fusion between two neighbouring ribs, situated on the same side, is usually associated with a series of vertebral anomalies of the thoracic segment[30], a situation that can be neither confirmed nor invalidated in our case, as the only piece preserved from the backbone of this man is the lumbar vertebra no. 5. The costal fusion occurred between the costal pairs 2 and 3, symmetrically, bilaterally, being localized at the vertebral end.

The atlas shows ***corrosion*** in the region of the joint to the occipital left condyle (fig. 8) – which is one of the manifestations of osteoarthritis, in our case – of ***secondary osteoarthritis***, generally manifested in young persons as a consequence of some diseases (*e.g.* rheumatoid polyarthritis). The sternum of type III – according to Ashley[31] – shows

[27] Blondiaux 1994, *op. cit.*; Molleson, Blondiaux 1994, *op. cit.*

[28] Ruggieri *et al.* 1998, 225-228.

[29] Tomaszewskav *et al.*, *op. cit.*

[30] Aufderheide, Rodriguez-Martin, *op. cit.*, 69.

[31] Barnes 1994, 114-125.

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a growth anomaly which caused its ***hypoplasia***, namely an insufficient development, manifested as size diminution. As a secondary osteoarthritis, implicitly a rheumatoid polyarthritis, is suspected in this case, sternal hypoplasia may be an effect of such a disease.

The femora have an additional ***trochanter*** – a characteristic directly related with the intense activity of the groups of muscles inserted on bone's posterior side. It is also a marker of equestrian activities (horseback riding)[32].

The tibiae show ***squatting facets*** in the contact areas with the tali bones – a re-modelling induced by the repeated crouching/squatting during daily activities[33]. In this case, the additional joint facets are situated in the anterior median part of the distal tibia epiphysis, which indicates that the bodily weight of this individual was a central one.

Harris lines are present at the level of the long bones' metaphyses, and much more intense on the tibiae and femora (fig. 9 and fig. 10), indicating an interruption in bone growth during childhood, a proof of some episodes of crisis/physiological stress, such as subnutrition, malnutrition, acute diseases, infections, avitaminoses, hunger or intoxications[34].

Tumulus no. 7– Grave no. 4 ($T_{7,}$ G_4)

This skeleton is represented by an incomplete *cranium* and by an almost complete postcranial skeleton. The osteological remains belong to a ***male*** subject with an approximate age at death of 35-40 years (***maturus*** category). On the whole skeleton, at both cranial and postcranial level, uniformly distributed reddish (ochre) traces are clearly visible on the anterior, posterior and lateral sides.

The neuroskull (table 1). Viewed in *norma verticalis*, the shape of the neurocranium is ovoid (fig. 11) while in *norma occipitalis* is of "house"-type. The cranial vault is long and medium-large. The cephalic index is mesochranic, at the inferior limit of the category. The vertical contour indicates a leaned forehead, a long and slightly arched line of the crown and a high and slightly convex occipital bone. The forehead is metriometopic and oval, with intermediary crests. The occipital bone is narrow, while the parietal-occipital transverse index situates it in the middle category. The bone relief is extremely well-developed (glabellar 4-5, supraorbital 2-3, occipital 3, mastoid 5). The whole skull evidences archaic characters.

[32] Blondiaux 1994, *op. cit.*; Molleson, Blondiaux 1994, *op. cit.*

[33] Satinoff, *op. cit.*

[34] Papageorgopoulou *et al.* 2011, 381-391.

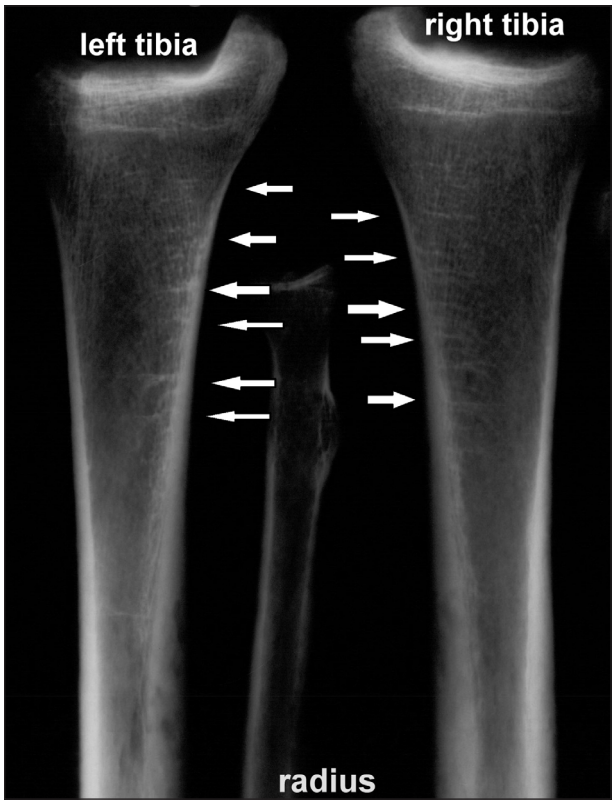

Fig. 10. T_7, G_3, ♂, 18-20 Y. O. Harris lines (right and left tibia).

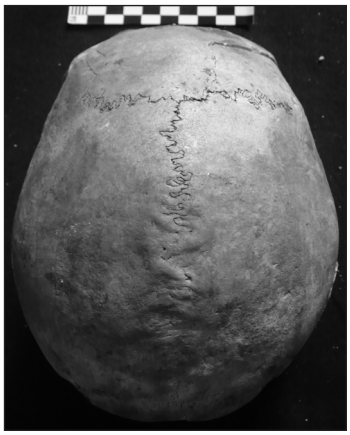

Fig. 11. T_7, G_4, ♂, 35-40 Y. O. Cranium. *Norma verticalis*.

Fig. 12. T_7, G_4, ♂, 35-40 Y. O. Cranium. *Norma facialis*.

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Fig. 13. T_7, G_4, ♂, 35-40 Y. O. Left temporal bone. Auditory torus

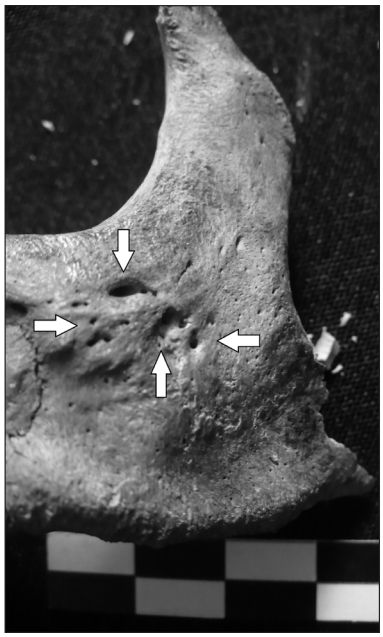

Fig. 14. T_7, G_4, ♂, 35-40 Y. O. Multiple zygomatico-facial foramina.

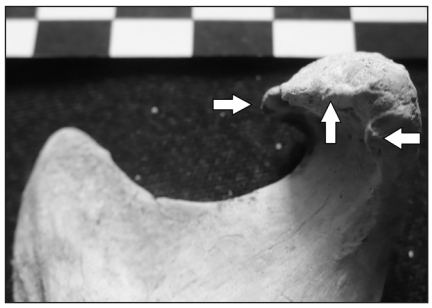

Fig. 15. T_7, G_4, ♂, 35-40 Y. O. Osteophytes at the left mandibular condyle.

Fig. 16. T_7, G_4, ♂, 35-40 Y. O. Lumbar vertebral bodies showing multiples osteophytes.

The facial skeleton (table 1, fig. 12). The orbits are mesoconch. The zygomatic bones are high, with a well-developed relief, situated at intermediary position *versus* the temporal bones. The canine fossa is slightly contoured. The piriform aperture is of the "ditch" type. The palatine vault has a convergent paraboloid contour and is very deep. Similarly with the cranial vault, the facial skeleton of this male also shows archaic characteristics.

The mandible (table 1) has a medium to large depth. The horizontal ramus is moderately high and not very thick, while the vertical one is high and large. The mentonier region is pyramidal, and well evidenced. The goniac relief is well represented, exceeding the plane of the horizontal ramus. Even if the mandible appears as extremely massive, the calculated index of robustness places it in the small masculine category.

The dentition is extremely altered by pedological factors. Both the dental pieces still present in the alveolus and those detached *post mortem* are extremely fragile and deteriorated. Two teeth had been lost *in vivo*: the central superior left incisor and the superior right premolar 2. In the masticatory region, the wearing degree varies from I to IV: M2 – III towards IV degree of wearing; M3 – I towards II degree of wearing. None of the 15 teeth present show caries or calculus.

The postcranial skeleton (table 2) is extremely robust and massive. The femora are hyperplatimere, having a crest and a subtrochanterian fossa and pilaster – markers of equestrian activities (horseback riding)[35]. The tibiae are hyperplaticneme, with additional joint facets at the contact with tali bones. The humeri are platybrachic, with an extremely pronounced deltoidian relief. The fibulae are grooved, and with a triangular diaphysary section.

The stature (table 2), calculated in good conditions, belongs to the large masculine category, at its extreme superior limit (large towards very large).

Pathologies, anomalies, epigenetic traits

The external auditory regions have an ***auditory exostoses*** (fig. 13), a trait with genetic determinism in the opinion of some specialists[36], but also an anomaly caused by environmental factors, such as low temperatures, cold wind, humidity and especially aquatic (cold water) activities[37].

Parietal foramina are present on the parietal bones, in the area of the sagittal suture and of

[35] Blondiaux 1994, *op. cit.*; Molleson, Blondiaux 1994, *op. cit.*

[36] Berry, Berry 1967, 361-379.

[37] Hutchinson *et al.* 1997, 417-422; Özbek 2012, 181-186.

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the *lambda* point. The left mastoid process has three ***exsutural foramina***. The left zygomatic bone shows ***multiple zygomaticofacial foramina*** (fig. 14). The supraorbital region shows at both orbits ***complete supraorbital foramina*** (extremely large and deep). These four traits represent instruments for measuring the degree of endogamy and also markers of the environmental conditions under which the subject had lived – a cold and humid climate.

Numerous components of the skeleton show both, on the skull (the temporomandibular joint), and on the postcranial skeleton (the spine, the humeroulnar joint, the clavicles, the bones of the inferior and superior members) the existence of osteoarthritis. As the age at death of this man is under 40 years, the malady is a ***secondary osteoarthritis*** that manifests in young persons as a result of some diseases, such as ***rheumatoid polyarthritis***. In our case, osteoarthritis manifested both through the development of osteophytes and enthesophytes, and through joint deformation.

Consequently, the mandible developed osteophytes in the area of contact with the skull (fig. 15). The spine shows osteophytes on almost all thoracic and lumbar vertebrae (fig. 16). Bone excrescences are also present on both patellae, on a few phalanges (fig. 17), and in the left humero ulnar joint. In this last case the effects of the disease were much more severe, up to bone deformation of the ulna (fig. 18).

Another manifestation of osteoarthritis in this man is the development of enthesophytes on almost all long bones of the superior and inferior members, and also on the clavicles. The traces left on the bones by the muscle insertions, accompanied by enthesophytes illustrate the physical efforts made by the subject along his life: sustained arm movements in anterior, posterior and lateral direction, flexion and extension of the forearm and the supination movement, movements of the inferior members through extension and flexion, external rotation and thigh extension, and knee flexion. All these movements and, implicitly, the group of muscles responsible for them, leave profound traces, which appear as excavations in the bone wall[38].

On both distal epiphyses of the tibiae, additional joint facets are present (fig. 19) – ***squatting facets*** – as a remodelling bone effect of repeated crouching (hyperdorsiflexion), accompanied by heavy physical activities.

[38] Teodorescu 1982; Chiriac *et al.* 1995.

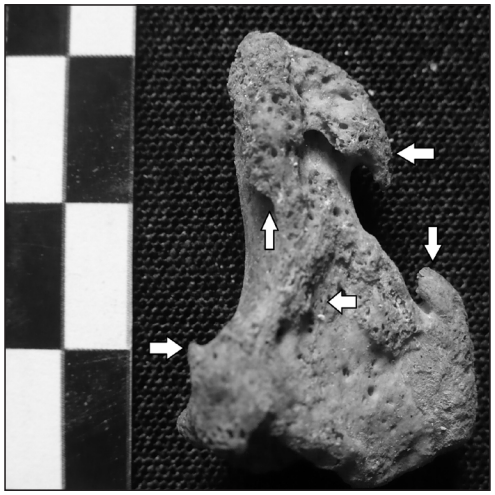

Fig. 17. T_7, G_4, ♂, 35-40 Y. O. Distal phalanx showing osteophytes.

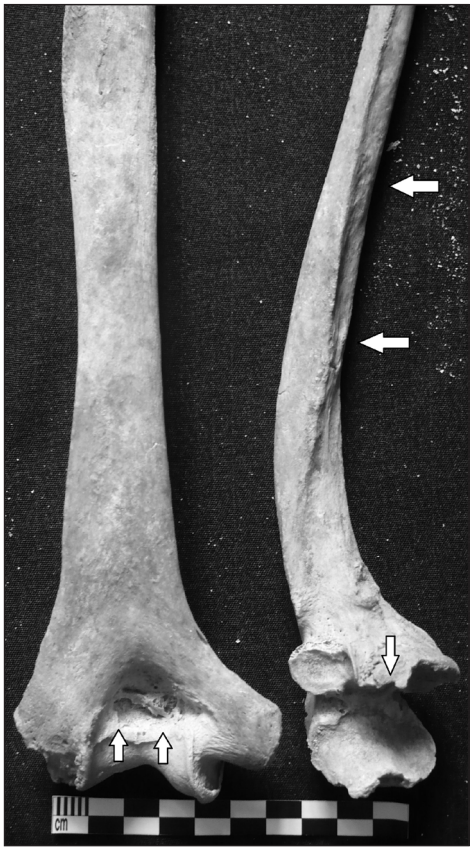

Fig. 18. T_7, G_4, ♂, 35-40 Y. O. Osteoarthritis of the left humeroulnar joint.

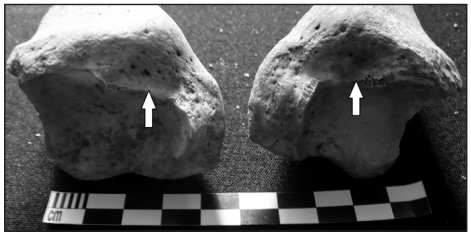

Fig. 19. T_7, G_4, ♂, 35-40 Y. O. Anterior surface of the lower end of the tibiae showing squatting facets.

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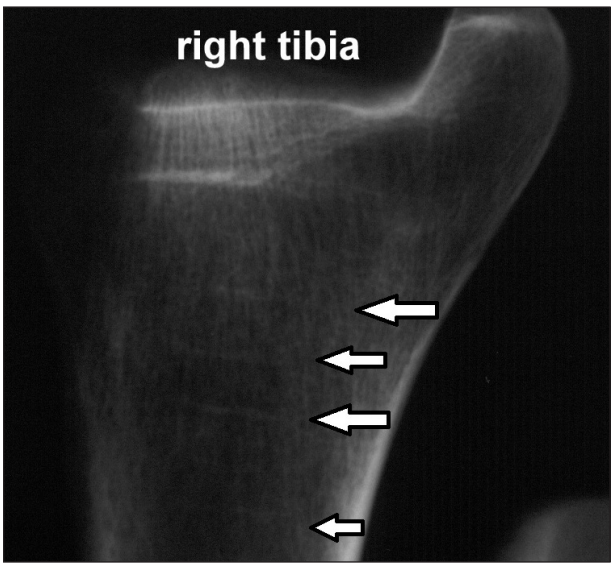

Fig. 20. T_7, G_4, ♂, 35-40 Y. O. Harris lines.

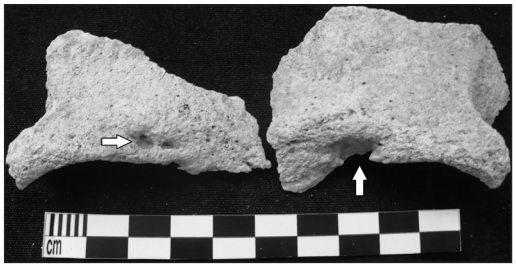

Fig. 21. T_7, G_5, ♂, 40-45 Y. O. Right side – supraorbital complete foramen, left side – supraorbital notch.

Fig. 22. T_{7A}, G_1, ♀, 35-40 Y. O. Maxilla and mandible, profile view.

Fig. 23. T_{7A}, G_1, ♀, 35-40 Y. O. Mandible, occlusal surface.

The metaphyses of the long bones show the presence of ***Harris lines*** (fig. 20) – representing interruptions of bone growth, namely physiological stress/crisis: subnutrition, malnutrition, acute diseases, infections, avitaminoses or intoxications[39]. The lines are more pronounced on the tibiae.

Tumulus no. 7– Grave no. 5 ($T_{7,}$ G_5)

The skeletal remains of this person are considerably fragmented – for example, the skull is represented by only nine fragments (from the frontal bone, parietal bones, right temporal bone and the right mandibular half), while the postcranial region is represented by a fragment of the scapula and the diaphyses of the long bones of the superior members (humeri, radii and ulnae). These bone pieces, showing an extremely pronounced robustness, belonged to a ***male*** subject with the age at death of 40-45 years (***maturus*** category).

The neuroskull (table 1). The cranial relief is extremely pronounced on both the frontal bone (glabellar 4, supraorbital 2-3) and on the mastoid process (degree 5).

The mandible (table 1), represented only by its right side, appears as very robust. The vertical ramus is short and large, the horizontal one is high.

Dentition. During his life, the man suffered at least two dental losses, namely the right inferior molars 1 and 2, whose alveolus is wholly healed and resorbed.

The postcranial skeleton (table 2) appears as extremely robust. According to their section indices, the humeri are pronouncedly eurybrachic, the insertion places of the deltoidian muscles showing deep reliefs, excavations on the bone wall, and enthesophytes.

Pathologies, anomalies, epigenetic traits

The right supraorbitary region of the frontal bone has a ***complete supraorbital foramen***, and the left one has a ***supraorbital notch*** (fig. 21), both representing responses of the organism (in particular, of the head), through thermoregulation, to the low ambiental temperatures. That suggests the fact that the individual lived in a cold and humid climate.

The insertions of the deltoidian muscle on the diaphysis of the humeri left traces in the bone wall, accompanied by ***enthesophytes***. These two phenomena appear as manifestations of the ***osteoarthritis*** installed at young age, while also revealing the physical effort constantly made by this subject

[39] Papageorgopoulou *et al., op. cit.*

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with his arms, by means of movements in anterior, posterior and rising direction.

Tumulus no. 7A – Grave no. 1 ($T_{7A,}$ G_1)

This skeleton is relatively well conserved. From the cranium, only the left half could be reconstituted, the right one being too fragmented and incomplete. The mandible is intact. The postcranial skeleton, even though fragmented here and there, is represented by all its components. The following elements are missing: five cervical vertebrae, seven thoracic vertebrae, the whole lumbar vertebral segment, the right clavicle and the sternum. This quite gracile skeleton belonged to a ***female*** subject with the age at death of 35-40 years (***maturus*** category).

The neuroskull (table 1). Viewed in *norma verticalis*, the form of the neurocranium is ovoid while in *norma occipitalis* is of "house"-type. The vertical contour indicates a convex and oval forehead, with intermediary-type crests. The cranial relief is weakly developed on the frontal bone (glabellar 1-2, supraorbital 1) and moderately on the mastoid processes (degree 2-3).

The facial skeleton (table 1). The piriform aperture is anthropine. The palatine vault shows a convergent paraboloid contour, small depth and mesostaphyline palatinal index. As a general profile, the facial skeleton seems to have had a superior alveolar prognatism (fig. 22), an appreciation justified especially by the leaning angle of dental abrasion.

The mandible (table 1, fig. 22 and fig. 23) is moderately gracile, with small width and depth. The horizontal ramus is low and moderately thick, while the vertical one is high and large. The mentonier region has a button aspect, and the goniac relief is attenuated, at the same level with the horizontal ramus. The index of robustness has medium values.

Dentition (fig. 22 and fig. 23) shows neither caries nor infectious processes of different nature. The wearing degree is different. In the masticatory regions, wearing varies from degree I (M3) up to degrees II-III (M2) and even IV-V (M1). The jugal teeth, as well as the primary masticators, evidence increased wear (degree IV). Worth mentioning is that such a wear is extremely advanced for an age of 35-40 years, which induces the idea that, possibly, this woman used her teeth as an instrument of work (supporting, cutting, grinding). On the other hand, such an advanced wear might have been also caused by the consumption of hard, raw or fibrous food.

The postcranial skeleton (table 2) is gracile. The femora are hyperplatimere, with no pilaster and with a very weakly developed subtrochanterian relief. The tibiae are mesocnemic. The humeri, when considering the index of diaphyseal section, are asymmetrical: the right one is platybrachic, the left - eurybrachic. Both humeri show in their distal extremity incipient supratrochlear foramen.

Pathologies, anomalies, epigenetic traits

On both dental arches, especially on the mandible, a thin layer of ***supragingival calculus/tartar*** (mineralized bacterial plaque) is present. The deposit is grey-yellowish, towards brown. Caries are absent; a phenomenon that can be explained by the incompatibility of the two processes (calculus *versus* caries)[40].

The frontal bone shows ***metopism*** – a non-metric trait characterized by the persistence of the metopic suture (fig. 24), a suture which, generally, closes completely during early childhood. As to the possible cause of such a phenomenon, the genetic factor is usually mentioned[41].

The left part of the frontal bone has a ***supraorbital notch***, which represents a good marker of the climatic conditions (cold and humid) under which the subject had lived[42].

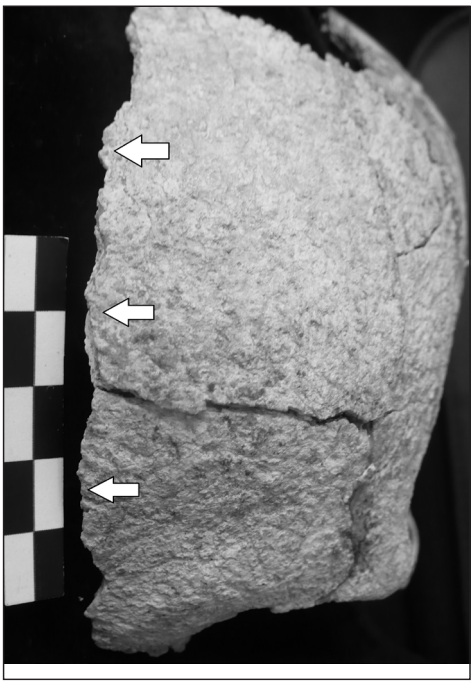

Fig. 24. T_{7A}, G_1, ♀, 35-40 Y. O. Frontal bone showing metopism.

[40] Slootweg, *op. cit.*

[41] Castilho *et al.* 2006, 61-66.

[42] Tomaszewska *et al.*, *op. cit.*

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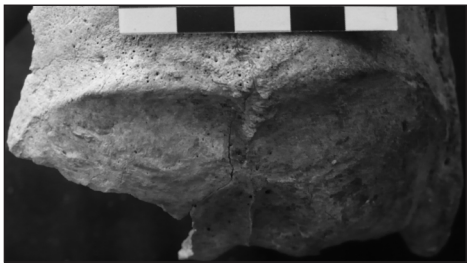

Fig. 25. T_{7A}, G_2, ♂, 45-50 Y. O. Occipital. Superior and inferior nuchal lines.

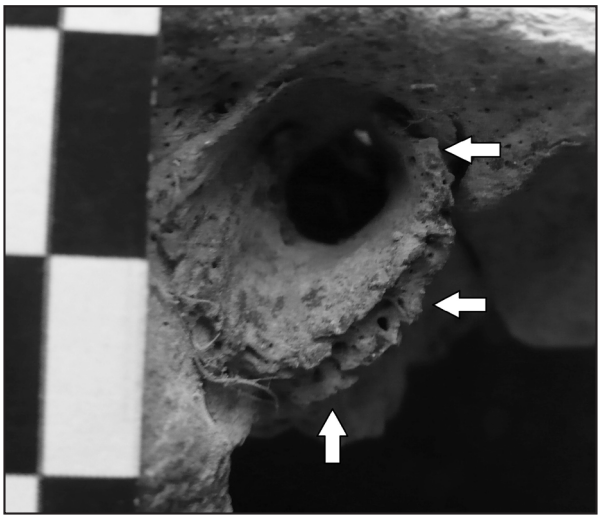

Fig. 26. T_{7A}, G_2, ♂, 45-50 Y. O. Right temporal bone. Auditory exostoses.

Fig. 27. T_{7A}, G_2, ♂, 45-50 Y. O. Retroarticular bridges/spurs on the atlas.

Both humeri show in their distal extremity a ***supratrochlear foramen*** – which is the effect of hypermobility (when the arm is repeatedly stretched-extended)[43] or of clumsiness[44].

Tumulus no. 7A – Grave no. 2 ($T_{7A,}$ G_2)

These remains are represented by an incomplete *cranium* which necessitated restoration and by a fragmented postcranial skeleton having about 75% of its components. The skeleton is extremely robust, maybe the most robust of the entire series. The extremely well developed bone relief is clearly visible on both skull and postcranial bones. This skeleton, showing archaic characters, belongs to a ***male*** subject with the age at death of 45-50 years (***maturus*** category). Some of the osteological remains have reddish (ochre) traces on the external bone wall, non-uniformly distributed on the right temporal bone, occipital bone, zygomatic bones, right humerus, left ulna and right fibula.

The neuroskull (table 1). Viewed in *norma verticalis*, the shape of the neurocranium is ovoid while in *norma occipitalis* is of "house"-type. The vertical contour indicates a leaned forehead, a long and slightly arched line of the crown and a moderately high, curved and convex occipital bone. Considering its width, the occipital bone belongs to the large/big category. The bone relief is well-developed on the frontal bone (supraorbital 2), moderately on the occipital bone (3) and very pronounced on the mastoid process (4-5). The places of nuchal musculature insertion on the occipital bone are very well evidenced (fig. 25). Probably, this man used his head to carry very heavy burdens on it.

The facial skeleton (table 1). The zygomatic bones have medium to large size, and a well developed relief. Advanced fragmentation prevented any other observations.

The mandible (table 1) is typically masculine, very robust, with considerable width and reduced depth. The horizontal ramus is moderately high and very thick, the vertical one is short and very large, the mentonier region has a prominent pyramidal aspect, while the goniac relief is extremely well-outlined, exceeding by far the plane of the horizontal ramus. The index of robustness takes very high value.

Dentition is strongly affected by the pedological factors. The teeth still present in the alveolus appear only as radicular remnants, a situation caused by neither dental wear nor caries, but by the action of the soil which, practically, consumed and fragilized them, making them very sensitive to any manoeuvre. However, a few observations could be made. Apparently, this subject had no caries and no calculus, and suffered no *in vivo* dental losses and no other infectious processes (for example, granulomas). Dental wear could not be appreciated, because of the extreme fragmentation of the crowns. Even if highly altered by the soil, the massiveness of the teeth may still be deduced.

[43] Lamb 1890, 159-174.

[44] Singhal, Rao, *op. cit.*; Mahajan, *op. cit.*

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The postcranial skeleton (table 2), quite well preserved, is extremely robust and massive. The right humerus, the only measurable piece, may belong (when considering the diaphyseal section index) to the platybrachic category. It shows an extremely well marked deltoidian relief.

Pathologies, anomalies, epigenetic traits

In the vicinity of the sagittal suture, at small distance from the *lambda* point, the right parietal bone shows a ***parietal foramen***. The right mastoid process shows an ***exsutural foramen***. The left zygomatic bone has two ***zygomaticofacial foramina***. The right supraorbital region is provided with a ***supraorbitary notch***. These four traits are useful in genetic studies for establishing the degree of endogamy. They are also markers of the environmental conditions under which the individual had lived (a cold and humid one)[45].

The external auricular regions show auditory ***exostoses*** (bone excrescences on the inferior wall of the auditory orifice (fig. 26), a characteristic with a special genetic determinism[46] and/or a marker of the aquatic (cold water) activities[47].

The atlas (the first cervical vertebra) is provided, bilaterally, with ***retroarticular spurs*** (fig. 27). Also defined as bridges, these formations belong to the group of non-metric vertebral traits, being used as instruments for detecting endogamy in genetic studies[48].

Cervical vertebrae nos. 3 and 4 have an ***accessory transverse foramina*** (fig. 28), which represents a non-metric vertebral trait acting as a possible marker of the high extent of endogamy[49].

In the postcranial segment, the skeleton of this 45-50 year-old man presents numerous indications attesting the presence of ***degenerative osteoarthritis***, a disease of joints associated with advanced age and with the hard labour that constantly involves the back bones and muscles. In this case, the disease affected the entire spine. The presence of corrosion/porosity and of marginal osteophytes may be observed on the cervical vertebral bodies (fig. 28). The thoracic and the lumbar vertebral bodies show Schmorl's nodes (vertical intervertebral hernia) and marginal osteophytes (fig. 29). The phenomenon is a response to the various forms of stress/pressure exercised upon the back bones, and maintained for a long time

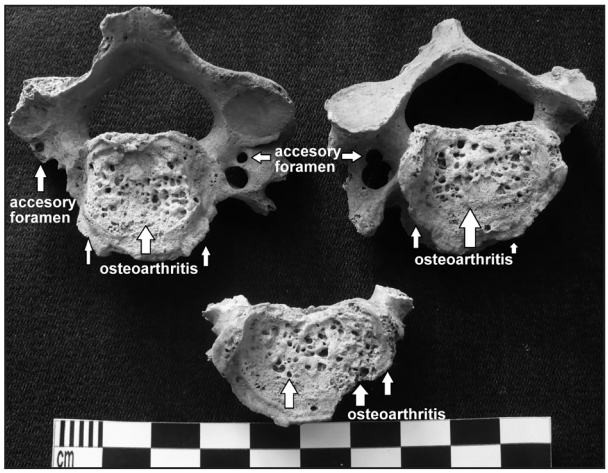

Fig. 28. T_{7A}, G_2, ♂, 45-50 Y. O. Cervical vertebrae showing accessory transverse foramina and affected by osteoarthritis.

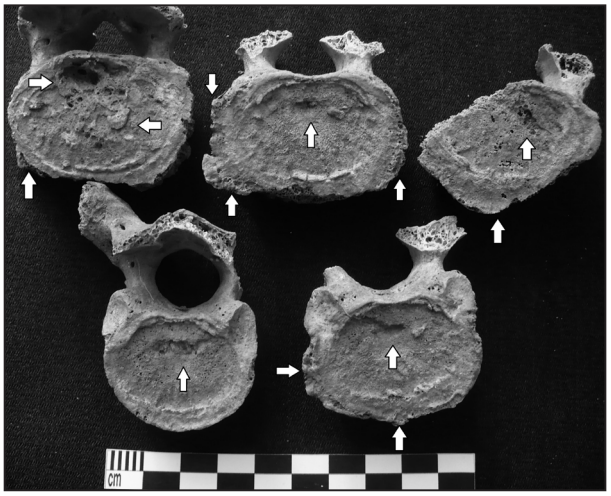

Fig. 29. T_{7A}, G_2, ♂, 45-50 Y. O. Thoracic and lumbar vertebrae affected by osteoarthritis.

period. On the bones of the members, in the area of muscular insertion, enthesophytes (bone excrescences resulted from ligaments' ossification) occurred, which a sign of the continuous physical effort is made by this person for a long time.

Tumulus no. 7A – Grave no. 3 ($T_{7A,}$ G_3)

The skeletal remains of this individual, well conserved, are represented only by postcranial bones, namely: four cervical vertebrae, all thoracic and lumbar vertebrae, non-ossified sacral vertebrae, coxal bones, the right clavicle, scapulae, ribs, femora, tibiae, the right (?) fibula, humeri, radii and the left (?) ulna. The diaphyses of the long bones show non-ossified epiphyses. As to the cranial skeleton, it is wholly absent (the superior and inferior maxillary included) so that the age at death could be established only from the size of the postcranial bones.

We could measure the length of three complete long bones (measured without epiphyses): the

[45] Tomaszewska *et al.*, *op. cit.*

[46] Berry, Berry, *op. cit.*

[47] Hutchinson *et al., op. cit.*; Özbek, *op. cit.*

[48] Manjunath 2001, 488-490.

[49] Sharma *et al.* 2010, 229-231.

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right femur, the left femur and the right humerus. The diaphysis of the right humerus is 202 mm long, a value indicating an age around 7 years. The diaphyses of the femora, slightly asymmetrical, have lengths of 275 mm (the right one) and 277 mm (the left one), which indicates an age of about 6-7 years. The skeleton belonged to a child with the age at death of about 6-7 years (***infans I*** category), probably male (a quite reserved appreciation, based on the characters of the pelvic girdle).

The low conservation extent of the subadults and the fact that some anomalies are manifested only later during lifetime permit the observation that this child has no anomalies, pathologies or non-metric characteristics that are macroscopically visible.

Tumulus no. 7B – Grave no. 1 ($T_{7B,}$ G_1)

This skeleton, even if fragmented, is relatively well preserved. The cranial portion is represented by the following pieces: the frontal bone, the parietal bones, fragments of the temporal bones and of the occipital one, and the left portion of the mandible (without the dental alveolus). The postcranial skeleton is represented by six fragments from the vertebral apophyses, 23 rib fragments, pieces of the right femur, of the humeri, of the right (?) radius and right (?) ulna.

The age at death was approximated from the size of the frontal bone chord (straight line distance)[50]: minimum width of the forehead (*ft-ft*) – 95 mm, maximum width of the frontal bone (*co-co*) – 114 mm, maximum length of the frontal bone (*n-b*) – 106 mm. The skeleton belonged to a child that died at the age of around 1.5-2 years (***infans I*** category), of indeterminate sex.

Certain skeletal remains of this child show reddish traces (ochre), unevenly distributed on the external bone wall. As to the skull, the ochre traces are intense on the frontal and parietal bones and more attenuated on the occipital one while, in the postcranial portion, the ochre occurs on the diaphyses of the femora, humeri, radii and ulnae.

Tumulus no. 7B – Grave no. 2 ($T_{7B,}$ G_2)

This skeleton is represented by only a few extremely fragmented postcranial remains, as follows: the superior third of the diaphysis of the right femur, the middle third of the diaphysis of the left femur, the diaphysis of the right tibia, and fragments from the diaphyses of the right radius and right talus. Even if in a state of precarious conservation caused by the action of the pedological factors, the massiveness and robustness of the skeleton can be still deduced. It belonged to a ***male*** subject with an age at death of 35-40 years (***maturus*** category).

The postcranial skeleton (table 2). From the perspective of the platymeric index, the femora are asymmetrical: the right femur is of platimer type, the left one is hyperplatimer. The index of pilaster was calculated only for the right femur, and gave the highest value of the whole series. The subtrochanterian relief is moderate, and represented on both femora by fossa and crest. All these three characters are markers/indicators of equestrian activities (horseback riding)[51]. The right tibia is platycnemic, at the inferior limit of the category. Another observation regarding the right tibia concerns the aspect of saber shin (hiperplatycnemia), feature possibly caused by diseases such as, treponematosis, Paget's disease, vitamin D deficiency or Weismann-Netter syndrome[52]. The final diagnosis is still uncertain as in this case, a detailed analysis on the probable causes of hyperplatycnemia was not possible.

Pathologies, anomalies, epigenetic traits

Apart from a subtrochanteric moderate ditch and fossa, the femora show a pronounced pilaster, the ***linia aspera***, also defined as femoral crest, being extremely well evidenced. A prominent and rugous *linia aspera* indicates overstressing of the group of muscles inserted in such places and, as previously mentioned, equestrian activities. The role of this group of muscles is of extending the inferior member, of adduction, flexion and external rotation of the hip, extension of hip and flexion of the knee, abduction and lateral rotation of the inferior member. As a result of the overstress, the tendons of these muscles get ossified, thus causing formation of enthesophytes (bone outgrowths) disclosing the extreme physical effort made by this man.

Anthropometric analysis

The absolute (measurements) and relative (indices) anthropometric values of the skeletal remains exhumed from the tumular necropolis of Cernavodă, listed in table 1 for the cephalo-facial segment and in table 2 for the postcranial segment, show, as expected, slightly different metric and conformative characteristics in the two sexes.

For the male group of subjects (five individuals), the following characteristics may be mentioned:

[50] Young 1957, 367-386.

[51] Blondiaux 1994, *op. cit.*; Molleson, Blondiaux 1994, *op. cit.*

[52] White *et al.*, 2012, 261.

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length of the neurocranium (*g-op*) – big; width of the neurocranium (*eu-eu*) – medium; height of the neurocranium (*po-b*) – big towards very big; cranial index (*eu-eu/g-op*) – mesochranic; minimum width of the forehead (*ft-ft*) – medium; maximum width of the forehead (*co-co*) – small; the frontal-transversal index (*ft-ft/co-co*) – oval forehead, of intermediary type; the frontal-parietal index (*ft-ft/eu-eu*) – metriometopic; the width of the occipital (*ast-ast*) – medium; the parietal-occipital index (*ast-ast/eu-eu*) – medium; maximum facial width (*zy-zy*) – extremely big; orbitary height – small; orbitary width (*mf-ek*) – medium; orbitary index – mesoconch; nasal width (*al-al*) – big; width of the mandible in the goniac region (*go-go*) – very big; width of the mandible in the area of contact with the skull (*kdl-kdl)* – big towards very big; index of mandibular robustness ($69_3/69_1$) – high value; humeri – eurybrachic; tibiae – platycnemic; femora – hyperplatimere, with pilaster and sometimes with an additional trochanter; stature – tall; skeletal robustness – extremely high.

For the female group of subjects (three individuals), the observed characteristics are as follows: minimum width of the forehead (*ft-ft*) – big; maximum width of the forehead (*co-co*) – big; the frontal-transversal index (*ft-ft/co-co*) shows an oval forehead, of intermediary type; the palatal index (enm_2-enm_2/*ol-st*) – mesostaphyline; length of the mandible in the goniac region (*go-go*) – small; width of the mandible in the area of contact with the skull (*kdl-kdl)* – very small; the index of mandibular robustness ($69_3/69_1$) – small value; humeri – eurybrachic; tibiae – platycnemic towards mesocnemic; femora – platimere or even hyperplatimere, with a weak pilaster or without it; skeletal robustness – moderate.

Paleodemographic analysis

The osteological series exhumed from the tumular necropolis of Cernavodă (tumuli nos. 7, 7A and 7B) is represented by 10 human skeletons: five males, three females and two subjects with undeterminable age (*infans I*). One of the five men died at adolescent age, namely in the 14-20 years interval. Out of these 10 skeletons, three individuals did not exceed the subadult age (*infans I*, *infans II* and *juvenis*), while the other seven (four men and three women) lived more than 20 years (*adultus*, *maturus*). Infant mortality rate (0-14 years) records a value of 20%, while that of the juvenile segment (14-20 years), when the human organism is considered to have been made a successful biological adaptation, is of 10%. Consequently, mortality in the segment of population with ages at death between 0-20 years registers quite a high value – 30%, which means than one third of the population did not live until adulthood. For the 20-x years interval, most of the deaths appear in the *maturus* category (70%), no decease being recorded for the *adultus* category (20-30 years). None of them reached old age (60-x years).

The important observation to be made is that, in the population under investigation, the period of maximum mortality corresponded to the *maturus* interval. As this interval is extended over 30 years (between the ages of 30 and 60), while that of early childhood lasts only seven years (between birth at the age of 7), the 20% mortality registered for the *infans I* interval permits the assertion that the maximum risk of mortality in this population occurred during early childhood. The high infantile mortality may be caused by the concentration of the dwellings around a central nucleus, a phenomenon characteristic for the tribal communities of the Bronze Age, which means a higher density of the population, viewed as a major risk factor of contamination and spreading of epidemics, especially among babies and children[53].

Table 3 illustrates the structure, by sex and age groups, of the population exhumed from tumuli nos. 7, 7A and 7B, compared with the contemporary population from the same tumular complex of Cernavodă, namely the series from tumulus no. 3[54]. A first important observation of such a comparative analysis is that infantile mortality (*infans I* and *infans II*) is higher in the series analyzed here, compared with the one from tumulus no. 3 (20% *versus* 14.3%). For the *juvenis* category of age (14-20 years), the situation is reversed, the percentage of adolescents in tumulus no. 3 being at least two times higher than the value recorded for tumuli nos. 7, 7A and 7B. However, summing up the values of *infans* with those of the juvenile subjects, one may observe that the percentage of subadults takes quite similar values in the two comparative series. In the *adultus* category of age, mortality in tumulus 3 is 14.3%, while in the series analyzed here, no *adultus* have been registered. Surprising is the situation recorded for the *maturus*

[53] Florescu 1964, 105-125; Miu 1999, 92-98.

[54] Schuster *et al.*, *op. cit.*, 17-51. The demographic data, obtained from statistical calculations performed by the authors of the present study, were based on the anthropological study of the 21 individuals excavated from tumulus no. 3, found on the Cernavodă-Medgidia route A2 highway. The determinations considered here, referring to sex and age at death, have been made by Alexandra Comşa – anthropologist at the "Vasile Pârvan" Institute of Archaeology in Bucureşti and co-author of the volume on the results of the archaeological excavations performed at tumulus no. 3.

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category of age (30-60 years): while in the case of tumulus 3 only 19% died at this age, in the case of tumuli 7, 7A and 7B the percentage is more than three times higher (70%). None of the persons in the four tumuli (T3 or T7, T7A, T7B) reached old age (60-x years).

Is it possible that, in the population of tumulus no. 3, so few members of the community exceeded the age of 30 years? Or this impression may be created by the six individuals of that burial mound, whose age could not be determined? Even if the six skeletons from tumulus no. 3 might have belonged to the *maturus* category of age (30-60 years), the percentage of matures in the two compared skeletal series would not agree, which urges us to consider that the only possible explanation is the non-uniform structure of the investigated group (tumuli nos. 7, 7A and 7B), implicitly, the very small number of individuals (only 10).

Sex ratio or *the masculinity index* in the population from tumuli nos. 7, 7A and 7B is supraunitary, indicating a higher number of male skeletons, compared to the female ones (5 men/3 women = 1.66) and, consequently, a dominant presence of men. The same situation, yet much more pronounced, characterizes tumulus no. 3, where the ration between sexes is of 10 men/2 women (*sex ratio* = 5.0). Naturally, in the last population (tumulus no. 3) one should also consider the six individuals of undetermined sex, which might modify the registered ratio in favour of one sex or another. Worth mentioning is, nevertheless, the fact that a high value of the masculinity index may suggest that the investigated population used to live peacefully, without being involved in possible intra- or inter-tribal conflicts – events which, once produced, would have undoubtedly caused a subunitary masculinity index. On the other side, the fact that the three female subjects exhumed from tumuli nos. 7, 7A and 7B died after the age of 30 shows that the women of this population exceeded the adult age. As known, during adulthood (between ages of 20 and 30), in prehistory (and not only) the risk of death among women was quite high, many of them not living until maturity. This interval of age includes the period of maximum fertility, the frequency of deaths at childbirth and especially during the postnatal period being quite high, as a result of the numerous infections, complications, high risk of contagion, and poor hygiene conditions. The fact that a number of women succeeded in living beyond this critical moment of their life, reaching adulthood, shows that the social conditions that might have caused a high decease ratio among female adult populations were not as precarious as imagined. Obviously, this is only a supposition, as the number of skeletons exhumed from tumuli nos. 7, 7A and 7B is very low, including only three female subjects.

Life expectancy at birth (table 4), calculated for the whole population exhumed from tumuli nos. 7, 7A and 7B, is of 33.0 years, while, for the population from tumulus no. 3 is of 26.73 years. Thus, the difference observed between the two contemporary populations is negligible, of only 3-4 years. For the adult segment of the population from tumuli nos. 7, 7A and 7B, namely for the subjects older than 20 years, the life expectancy, calculated for each sex group, was of 21.25 years for men and of 25.83 years for women, that, on the average, women used to live 4-5 years more than men. As to tumulus no. 3, life expectancy after the age of 20, which could be calculated only for males, was of 18.33 years, almost three years lower than that of the men from tumuli nos. 7, 7A and 7B. The two females from tumulus no. 3 provided no information for determining their age at death, so that they could not be included in the calculation of life expectancy.

Analysis of pathologies, anomalies and epigenetic / non-metric traits

The presence of pathologies, anomalies and of the epigenetic traits in the skeletal series of Cernavodă exhumed from tumuli nos. 7, 7A and 7B is listed in table 5, both separately per sex groups (five men and three women), and for the whole adult group (eight individuals). No pathologies or bone anomalies were recorded at children (two subjects). However in these two cases, the conservation degree is low.

At cranial level, the most frequent pathologies are located on the dental arcades: *in vivo* tooth losses (two cases) and supragingival calculus (two cases). Less frequent pathologies (one case each) include osteoid osteoma[55] and osteoarthritis. Among the cranial epigenetic features, the highest value is recorded for the supraorbital notch (five cases), followed by the complete supraorbital foramen (four cases) and by the exsutural mastoid foramen (three cases). Other six non-metric cranial traits show a somehow lower, but significant presence: the parietal foramen, the zygomaticofacial double/multiple foramen and the auditory exostoses (two cases each), followed by the mandibular torus, the Wormian bones[56] and metopism[57] (one case each).

[55] Ruggieri *et al.*, *op. cit*. The osteoma is a small-sized benign tumoral formation, frequently occurring in children, adolescents and young adults.

[56] Jeanty *et al.* 2000, 862-869. The Wormian bones, representing anomalies from the normal pattern of bone fusion, have a high heritability. When occurring as a variant to normality, they are small-sized and hardly numerous. Possible causes: artificial cranial deformations, hydrocephalus, metabolic disorders, and metopism.

[57] Castilho *et al.*, *op. cit.* Metopism – *i.e.*, persistence of the suture uniting the two halves of the frontal bone – may be the

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At the postcranial level, the most frequent pathology observed is osteoarthritis, present in three quarters of the analyzed population (six cases). The subjects affected by osteoarthritis are mature persons, five males and only one female. A more reduced, yet significant presence is recorded for the Harris lines, appearing, according to the radiographies, at two male individuals. As to the postcranial epigenetic traits, significant percentages have been registered for those included in the category of occupational markers (mechanical enthesopathies), namely the humeral supratrochlear foramen and the squatting facets on the tibiotalar joint (three cases each). The preauricular[58] sulcus is present in two cases (one male, and one female). The lowest presence has been recorded for the following non-metric traits, also belonging to the group of occupational markers: talar extension, the additional femoral trochanter and the costoclavicular sulcus (one case each). The same reduced presence (one case each) is registered by some anomalies, hardly occurring in the anthropological collections: the retroarticular spur on the atlas, the accessory transverse cervical foramen, the sternal hypoplasia and the congenital rib fusion[59].

An especially important observation is the absence of dental caries, which is quite expected when considering the high presence of supragingival calculus[60]. This does not mean that, in the analyzed population, teeth were caries-free – see the *in vivo* dental losses mentioned in one quarter of the subjects. The falling teeth, or those voluntarily extracted have necessarily certain pathology, most often caries, their occurrence being directly related to alimentation. The fact that the subjects analysed here have caries-free maxillaries, yet with *in vivo* dental losses, may have different causes. Possibly, the members of this community were more concerned with their oral hygiene, which made them extract immediately the affected painful teeth. On the other side, the absence of caries and the high prevalence of dental calculus were observed by other authors, too, in nomad or semi-nomad communities of shepherds. A possible cause for this situation could be a local technique of food preparation and the high consumption of dairy products and meat[61].

As to the presence of osteopathies as signs of possible anaemia, deficiencies or diseases the series recorded two cases of Harris lines – a proof of bone growth interruption during childhood. Mention should be made of the fact that in neither of the cases the Harris lines were associated with dental hypoplasia or with cranial porosities. The very presence of the Harris lines, whichever their location, or association with related pathologies, may be a sign of physiological stress episodes during childhood: malnutrition, subnutrition, acute diseases, infections, deficiencies, intoxications, and hypocaloric or hypoproteic diet[62]. The prevalence of this pathology represents a useful instrument for the appraisal of the health of the infantile population.

As expected, the most frequent pathology is osteoarthritis, a degenerative joint disease, which advances slowly, causing in its final stages the total loss of joints' function and deformations of the joints. The responsible factors are: age, genetic predisposition, sex, race, obesity, traumatisms and movement, the last one being a compulsory condition for the installation of osteoarthritis[63]. The presence of osteophytes, of Schmorl's nodes and of corrosion on the spine, of osteophytes on other joints, as well as of enthesophytes in the places of muscular insertion indicates polyarthritic and, sometimes, rheumatic diseases in various stages of manifestation[64]. In the population exhumed from tumuli nos. 7, 7A and 7B, osteoarthritis is more frequent in males, comparatively with females. All five male skeletons are affected with osteoarthritis, especially at the level of vertebral column and superior and inferior members. It is only one female skeleton showing traces of this pathology.

In old populations, undoubtedly in the one of Cernavodă, too, a very important role in the development of enthesopathies was played by certain physical activities and specific occupations, which, according to the intensity of the physical

consequence of growth and development interruption, of hydrocephalus, of some sexual or hormonal dysfunctions; also included in the group of atavisms. Most frequently, the cause is the genetic factor.

[58] Houghton 1974, 81-390; Kurihara *et al.*, *op. cit.* In recent years, several authors discussed the correlations between the aspect of the feminine sulcus and the number of children born to a woman, the researches being also extended to modern populations by means of X ray investigations. The observation made was that some multiparous women show no preauricular sulcus of "pregnancy"-type. Such characteristic was also noticed on some male skeletons, especially in those with pronounced muscular insertions; in these cases, the sulcus had a different form from the one indicating parity in women.

[59] Barnes, *op. cit.* Rib fusion is a rare congenital anomaly, present in about 0.3% of the members of a population.

[60] Slootweg, *op. cit.* The dental caries and the supragingival calculus/tartar are reciprocally incompatible processes; the caries are developed in an acid medium, while the calculus – in an alkaline one.

[61] Lukacs 1989, 261-286.

[62] Papageorgopoulou *et al.*, *op. cit.*

[63] Nevitt *et al.* 2006; Waldron, *op. cit.*

[64] Schmorl, Junghanns 1971.

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effort made left traces on the bones. Study on the morphology of the areas of muscle and ligament insertion on the bones may provide interesting information. It goes without saying that such phenomena have been also recorded in the skeletal series of Cernavodă. The muscular impressions left on the bone components of the scapular girdle indicate activities involving carrying of heavy burdens or handling of rudimentary tools. The impressions while observed on the bones of the superior members indicate repeated movements of arm extension and stretching, namely flexion-extension movements. The traces left on the femora indicate equestrian activities (horseback riding). Other traces left on the bones of the inferior members, together with bone remodelling (mainly in the ankle zone) indicate forced maintenance of the body in vertical position, with overburdens carried on the back, accompanied by marching for long distances on uneven ground. In the case of such osteolytic traces, sexual dimorphism is extremely pronounced, women being much less marked by these signs than men.

As to the epigenetic traits, in the population of Cernavodă, nine features have been identified on the skull and 10 on the postcranial skeleton, which might disclose that, potentially, the community was demographically closed, with a high extent of endogamy. On the other side, a series of epigenetic characteristics (the supraorbital notch, the complete supraorbital foramen, the parietal foramen, the exsutural mastoid foramen and the zygomaticofacial one) suggest the climatic conditions in which the community used to live – a cold and humid climate. These foramens get enlarged or multiplied as an adaptive response of the organism through thermoregulation to the low environmental temperatures, for preventing the heat losses through the neurovascular package, which becomes thicker and is more profoundly located in the bone structures[65]. The auditory exostoses, present in two male subjects, may also offer indications upon the climatic conditions (low temperatures, cold wind, humidity), and also upon some preoccupations, such as prolonged and repeated activities in an aquatic environment, especially in cold water. In bioarchaeological studies this character is considered a marker of aquatic activities[66].

Some explanations should be provided on the humeral supratrochlear foramen, the additional femoral trochanter, the additional tibiotalar joint facets (squatting facets) and the rugous *linia aspera*. In the present study, based on the recommendations made by specialists, these four peculiarities have been included in the category of epigenetic characters[67]. However, they may also be the result of bone remodelling caused by certain activities characteristic for subjects, style of life. For example, the humeral supratrochlear foramen is induced by the bone atrophy occurring after ossification; as a result of mechanical pressure exercised upon the olecranon fossa when the arm is repeatedly stretched-extended (repeated flexion-extension movement)[68]. Clumsiness may also provoke mechanical pressure, being therefore considered as one of the factors inducing the development of the humeral supratrochlear foramen. Some authors include the septal humeral foramen in the category of atavisms[69]. The additional facets on the tibiotalar joint (squatting facets) may be caused by the mechanical stress exercised upon the joint surfaces - a consequence of the crouched/squatting position, accompanied by toilsome physical activities[70]. This allows drawing of conclusions on the movements and positions of the inferior members preferred during daily activities. The additional tibiotalar joint facets actually indicate the intensity or regularity of the crouched posture during either labour or rest – hyperdorsiflexion – a constant habit in prehistory, gradually abandoned after diversification of the life styles. Another hypothesis, still vividly denied even today, pleads for the genetic inheritance of this characteristic[71]. The additional femoral trochanter along with the rugous *linia aspera* may be interpreted as directly related with the intense activity of the groups of muscles inserted in these places, correlated with horseback riding, once again indicating over-stressing daily activities[72].

Conclusions

The anthropological study of the osteological remains exhumed from tumuli nos. 7, 7A and 7B at Cernavodă (the Early Bronze Age) provides precious information for the region to which these funeral complexes belong, and also for the historical moment they illustrate. The extremely interesting results obtained led to important conclusions on the life style of those times, while also permitting a *post mortem* demographic representation of the population group studied here.

[65] Tomaszewska *et al.*, *op. cit.*

[66] Hutchinson *et al.*, *op. cit.*; Özbek, *op. cit.*

[67] Sjøvold, *op. cit.*; Bergmann, Hauser, *op. cit.*

[68] Lamb, *op. cit.*

[69] Singhal, Rao, *op.cit.*; Mahajan, *op. cit.*; Benfer, Tappen 1968, 19-28.

[70] Boulle 2001, 50-56; *idem*, 2001, 345-349.

[71] Satinoff, *op. cit.*

[72] Blondiaux 1994, *op. cit.*; Molleson, Blondiaux 1994, *op. cit.*

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The degree of conservation of the 10 skeletons (five males, three females and two children) is satisfactory. Apart from the high degree of robustness and high stature, the skeletons – mainly the male ones – also show numerous archaic characteristics. Four skeletons (two men, one woman and one child) show reddish traces of ochre, which means a 40% weight in the population buried in the three tumuli. In three of the cases, the traces of ochre are nonuniform distributed, appearing as uniform in only one case. Most often, they are located on the skull (frontal, parietal, occipital and zygomatic bones), as well as on the bones of the superior (humeri, radii and ulnae) and inferior (femora and fibulae) members.

As a result of the high infant mortality rate, one third of the population did not attain adulthood. The highest mortality risk is during the period of early childhood (0-7 years). The highest degree of mortality was recorded for the *maturus* interval (30-60 years). There were no deaths recorded for the *adultus* (20-30 years) and *senilis* (60-x years) age groups. The masculinity index is supraunitary, which attests the dominant presence of men. At the level of the whole population under investigation (0-x years), the average life span (life expectancy at birth) is of 33.0 years. For the subjects older than 20 years, life expectancy is of 21.25 years for men and of 25.83 years for women.

The observations on the osteopathies, correlated with the paleodemographic parameters, may provide valuable information on the living environment and socio-economic conditions under which this community performed its daily activities. The osteoarthritic problems discovered in three quarters of the population confirm the climatic conditions characteristic for the respective geographical area (cold and humid climate), which favoured the installation of rheumatismal affections. However, the extended presence of osteoarthritis in a population, especially in at young individuals may indicate the difficult living conditions they had to face on a daily basis. The young persons suffering of osteoarthritis used to overstress and stretch their supporting joints during hard and intense physical activities, such as lifting of heavy burdens and frequent carrying of loads on their back, repeated flexion-extension arm movements, the physical effort made in crouched position, marching on uneven terrain and on long distances with overburdens on the back.

Another important conclusion of the analysis of enthesopathies is the habit of practising aquatic and equestrian activities. The aquatic activities are sustained by the presence of the auditory exostoses (two men), while the equestrian ones (horse riding) – by the presence of the additional femoral trochanter (two men), of the femoral pilaster (two men and one woman) and of the enthesophytes developed on the femoral crest (three men).

As clues for the health condition, two cases of Harris lines, both at male individuals, suggest the presence, inside the community, of episodes of physiological stress during childhood (malnutrition, subnutrition, acute diseases, infections, alimentary deficit or intoxications).

Worth mentioning is the total absence of the dental caries, and the considerable presence of supragingival calculus/tartar, indicating an excessive consumption of dairy products and of a hyperproteic diet. This is consistent with the general diet of a population of fishermen and shepherds, and not farmers.

No traumatism has been observed on the bone system and no indications on the possible cause of death.

Interesting results have been also offered by the epigenetic traits, the population of Cernavodă being quite obviously “marked” in this respect. Nine epigenetic traits have been identified on the skull and 10 on the postcranial skeleton, which indicates a close community, with a high degree of endogamy. The fact that the importance of the non-metric (epigenetic) traits is based on the hypothesis that some of them show a high heritability degree, being therefore useful in the analysis of the biological distance between the extinct human populations.

The final conclusion of the complex anthropological study performed on the 10 human skeletons exhumed from tumuli nos. 7, 7A and 7B of Cernavodă is that the necropolis was used by peaceful people (no trauma related to battles) of the local community – a close, possible endogamic, pathologically “charged” community, whose members showed archaic characters and special robustness, performed physically difficult daily activities, including aquatic and equestrian jobs, and lived in a cold and humid climate, under harsh living conditions.

Romanian Academy – Iaşi Branch,
Department of Anthropological Research
angellisimal@yahoo.com;
antropologie.iasi@yahoo.com

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Table 1. Statistic values of the main, absolute (in mm) and relative (indices)[73], cephalo-facial dimensions

Martin No.	Character	MALES						FEMALES				UNDETERMINABLE		General average
		T_7, G_3	T_7, G_4	T_7, G_5	T_{7A}, G_2	T_{7B}, G_2	Male average	T_7, G_1	T_7, G_2	T_{7A}, G_1	Female average	T_{7A}, G_3	T_{7B}, G_1	
		18/20 years	35/40 years	40/45 years	45/50 years	35/40 years		40/45 years	55/60 years	35/40 years		6/7 years	1,5/2 years	
1	g-op	191	188	-	-	-	189.5	-	-	-	-	-	-	189.5
5	n-ba	130	-	-	-	-	130.0	-	-	-	-	-	-	130.0
7	ba-o	35	-	-	-	-	35.0	-	-	-	-	-	-	35.0
8	eu-eu	143	141	-	-	-	142.0	-	-	-	-	-	-	142.0
9	ft-ft	100	95	-	-	-	97.5	-	91	104	97.5	-	-	97.5
10	co-co	121	110	-	-	-	115.5	-	-	116	116.0	-	-	115.8
12	ast-ast	106	105	-	116	-	109.0	-	-	-	-	-	-	109.0
16	for. magn. breadth	26	-	-	-	-	26.0	-	-	-	-	-	-	26.0
17	ba-b	-	-	-	-	-	-	-	-	-	-	-	-	-
20	po-b	120	-	-	-	-	120.0	-	-	-	-	-	-	120.0
40	ba-pr	-	-	-	-	-	-	-	-	-	-	-	-	-
43	fmt-fmt	109	111	-	-	-	110.0	-	99	100	99.5	-	-	104.8
$43_{(1)}$	fmo-fmo	97	104	-	-	-	100.5	-	90	92	91.0	-	-	95.8
44	ek-ek	-	-	-	-	-	-	-	-	-	-	-	-	-
45	zy-zy	144	-	-	-	-	144.0	-	-	-	-	-	-	144.0
46	zm-zm	-	-	-	-	-	-	-	-	-	-	-	-	-
47	n-gn	-	-	-	-	-	-	-	-	-	-	-	-	-
48	n-pr	-	-	-	-	-	-	-	-	-	-	-	-	-
50	mf-mf	-	-	-	-	-	-	-	23	-	23.0	-	-	23.0
51	mf-ek	-	41	-	-	-	41.0	-	-	-	-	-	-	41.0
52	orbital breadth height	-	33	-	-	-	33.0	-	-	-	-	-	-	33.0
54	al-al	-	28	-	-	-	28.0	-	-	-	-	-	-	28.0
55	n-ns	-	-	-	-	-	-	-	-	-	-	-	-	-
62	ol-sta	-	-	-	-	-	-	-	-	47	47.0	-	-	47.0
63	enm_2-enm_2	-	-	-	-	-	-	-	-	39	39.0	-	-	39.0
65	kdl-kdl	-	-	-	127	-	127.0	-	97	108	102.5	-	-	114.8
66	go-go	99	-	-	122	-	110.5	-	88	84	86.0	-	-	98.3
68	depth of the mandible	75	79	-	73	-	75.7	-	69	68	68.5	-	-	72.1
69	id-gn	29	29	-	29	-	29.0	-	31	27	29.0	-	-	29.0
$69_{(1)}$	height at the n. f. level	29	31	-	30	-	30.0	-	28	27	27.5	-	-	28.8
$69_{(3)}$	thickness at the n. f. level	13	11	11	14	-	12.2	-	9.5	11.5	9.5	-	-	10.9
70	height of the vertical mandibular ramus	66	70	-	69	-	68.3	-	62	68.5	62.0	-	-	65.2
$70_{(3)}$	height of the mandibular notch	12	-	-	14	-	13.0	-	11	14	12.5	-	-	12.8
71	breadth of the vertical mandibular ramus	32	34	42	35	-	35.7	-	29	33	31.0	-	-	33.4
$71_{(1)}$	breadth of the mandibular notch	31	-	-	37	-	34.0	-	34	33	33.5	-	-	33.8

[73] Martin 1928.

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Table 1 (continued)

Martin No.	Character	MALES						FEMALES				UNDETERMINABLE		General average
		T_7, G_3	T_7, G_4	T_7, G_5	T_{7A}, G_2	T_{7B}, G_2	Male average	T_7, G_1	T_7, G_2	T_{7A}, G_1	Female average	T_{7A}, G_3	T_{7B}, G_1	
		18/20 years	35/40 years	40/45 years	45/50 years	35/40 years		40/45 years	55/60 years	35/40 years		6/7 years	1,5/2 years	
8/1	cranial index	74.9	75.0	-	-	-	75.0	-	-	-	-	-	-	75.0
17/1	cranial lenght-height index	-	-	-	-	-	-	-	-	-	-	-	-	-
17/8	cranial height-breadth index	-	-	-	-	-	-	-	-	-	-	-	-	-
20/1	auricular-long. index	62.8	-	-	-	-	62.8	-	-	-	-	-	-	62.8
20/8	auricular-transv. index	83.9	-	-	-	-	83.9	-	-	-	-	-	-	83.9
9/10	frontal-transversal index	82.6	86.4	-	-	-	84.5	-	-	89.6	89.6	-	-	87.1
9/8	frontal- parietal index	69.9	67.4	-	-	-	68.7	-	-	-	-	-	-	68.7
12/8	parietal-occipital index	74.1	74.5	-	-	-	74.3	-	-	-	-	-	-	74.3
16/7	occipital foramen index	74.3	-	-	-	-	74.3	-	-	-	-	-	-	74.3
40/5	gnathic index	-	-	-	-	-	-	-	-	-	-	-	-	-
47/45	total facial index	-	-	-	-	-	-	-	-	-	-	-	-	-
47/46	facial zygomatic index	-	-	-	-	-	-	-	-	-	-	-	-	-
48/45	facial superior index	-	-	-	-	-	-	-	-	-	-	-	-	-
52/51	orbitary index	-	80.5	-	-	-	80.5	-	-	-	-	-	-	80.5
50/44	interorbital index	-	-	-	-	-	-	-	-	-	-	-	-	-
54/55	nazal index	-	-	-	-	-	-	-	-	-	-	-	-	-
63/62	palatal index	-	-	-	-	-	-	-	-	82.9	82.9	-	-	82.9
45/8	cranial-facial transv. index	100.7	-	-	-	-	100.7	-	-	-	-	-	-	100.7
9/43	fronto-parietal index	91.7	85.6	-	-	-	88.7	-	91.9	104.0	98.0	-	-	93.4
9/45	jugo-frontal index	69.4	-	-	-	-	69.4	-	-	-	-	-	-	69.4
66/45	jugo-mandibular index	68.7	-	-	-	-	68.7	-	-	-	-	-	-	68.7
66/65	breadth mandibular index	-	-	-	96.1	-	96.1	-	90.7	77.8	84.3	-	-	90.2
66/9	gomo-frontal index	99.0	-	-	-	-	99.0	-	96.7	80.8	88.8	-	-	93.9
71/70	vertical ramus index	48.5	48.6	-	50.7	-	49.3	-	46.8	48.2	47.5	-	-	48.4
$69_{(3)}/69_{(1)}$	mandibular robustness index	44.8	35.5	-	46.7	-	42.3	-	33.9	42.6	38.3	-	-	40.3
66/68	lenght-depth mandibular index	132.0	-	-	167.12	-	149.6	-	127.5	123.5	125.5	-	-	137.6
$70_{(3)}/71_{(1)}$	mandibular notch index	38.7	-	-	37.8	-	38.3	-	32.3	42.4	37.4	-	-	37.9

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Table 2. Statistic values of the main, absolute (in mm) and relative (indices)[74] , postcranial dimensions

	Martin No.	Character	MALES						FEMALES				UNDETERMINABLE		General average
			T_7, G_3	T_7, G_4	T_7, G_5	T_{7A}, G_2	T_{7B}, G_2	Male average	T_7, G_1	T_7, G_2	T_{7A}, G_1	Female average	T_{7A}, G_3	T_{7B}, G_1	
			18/20 years	35/40 years	40/45 years	45/50 years	35/40 years		40/45 years	55/60 years	35/40 years		6/7 years	1,5/2 years	
			right/left	right/left	right/left	right/left	right/left	right/left	right/left	right/left	right/left	right/left	right/left	right/left	right/left
Humerus	1	max. length	-/307	356/-	-/-	-/-	-/-	356.0/307.0	-/-	-/-	-/-	-/-	202/-	-/-	356.0/307.0
	4	epic. breadth	63/63	69/72	-/-	-/-	-/-	66.0/67.5	-/-	-/-	-/-	-/-	-/-	-/-	66.0/67.5
	5	max. diam. midshaft	23/-	27/26	29/28	31/-	-/-	27.5/27.0	-/-	21/21	22.5/22	21.8/21.5	-/-	-/-	24.7/24.3
	6	min. diam. midshaft	19/-	20/19	24/24	23/-	-/-	21.5/21.5	-/-	17/16	16.5/17.5	16.8/16.8	-/-	-/-	19.2/19.2
	7	min. perimeter	60/56	66/66	76/74	82/-	-/-	71.0/65.3	-/-	58/56	54/57	56.0/56.5	-/-	-/-	63.5/60.9
	6/5	section index	82.6/-	74.1/73.1	82.7/85.7	74.2/-	-/-	78.4/79.4	-/-	80.9/76.2	73.3/79.5	77.1/77.9	-/-	-/-	77.8/79.4
	7/1	solidity index	18.2/-	18.5/-	-/-	-/-	-/-	18.4/-	-/-	-/-	-/-	-/-	-/-	-/-	18.4/-
Radius	1	max. length	249/-	275/277	-/-	-/-	-/-	262.0/277.0	-/-	-/-	-/-	-/-	-/-	-/-	262.0/277.0
	3	min. perimeter	42/-	44/44	-/-	-/-	-/-	43.0/44.0	-/-	-/40	-/-	-/-	-/-	-/-	43.0/44.0
	4	transv. diam. midshaft	15/-	16/17	20/-	-/-	-/-	17.0/17.0	-/-	13.5/14	-/-	13.5/14.0	-/-	-/-	15.3/15.5
	5	sagittal diam. midshaft	12/-	13/13	12/-	-/-	-/-	12.3/13.0	-/-	11/11	-/-	11.0/11.0	-/-	-/-	11.7/12.0
	3/1	robustness index	16.9/-	16.0/15.9	-/-	-/-	-/-	16.5/15.9	-/-	-/-	-/-	-/-	-/-	-/-	16.5/15.9
	5/4	section index	80.0/-	81.2/76.5	60.0/-	-/-	-/-	73.7/76.5	-/-	81.5/78.6	-/-	81.5/78.6	-/-	-/-	77.6/77.6
Ulna	1	max. length	275/272	302/292	-/-	-/-	-/-	288.5/282.0	-/-	-/-	-/-	-/-	-/-	-/-	288.5/282.0
	3	min. perimeter	40/38	41/41	-/-	-/-	-/-	40.5/39.5	-/-	38/35	-/-	38.0/35.0	-/-	-/-	39.3/37.3
	11	dorso-volar diam.	13/-	15/14	-/-	-/-	-/-	14.0/14.0	-/-	11.5/13	-/-	11.5/13.0	-/-	-/-	12.8/13.5
	12	transv. diam.	18/-	20/13	-/-	-/-	-/-	19.0/13.0	-/-	16/16	-/-	16.0/16.0	-/-	-/-	17.5/14.5
	3/1	robustness index	14.5/14.0	13.6/14.0	-/-	-/-	-/-	14.1/14.0	-/-	-/-	-/-	-/-	-/-	-/-	14.1/14.0
	11/12	section index	72.2/-	75.0/92.8	-/-	-/-	-/-	73.6/92.8	-/-	71.9/81.2	-/-	71.9/81.2	-/-	-/-	72.8/87.0
Femur	1	max. length	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	275/277	-/-	-/-
	2	max.morph.length	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
	6	sagittal midshaft diameter	23/24	32/34	-/-	-/-	33/-	29.3/29.0	-/-	28/26	-/21.5	28.0/23.8	-/-	-/-	28.7/26.4
	7	transverse midshaft diameter	27/26	30/31	-/-	-/-	26.5/-	27.8/28.5	-/-	26/26	-/26	26.0/26.0	-/-	-/-	26.9/27.3
	8	midshaft circumf.	81/78	95/100	-/-	-/-	92/-	89.3/89.0	-/-	84/82	-/77	84.0/79.5	-/-	-/-	86.7/84.3
	9	transv. subtroch. diameter	-/33	38/39	-/-	-/-	35/37	36.5/36.3	-/-	31/32	-/31	31.0/31.5	-/-	-/-	33.8/33.9
	10	sagittal subtroch. diameter	-/25	26/25	-/-	-/-	27/26.5	26.5/25.5	-/-	25/23	-/21	25.0/22.0	-/-	-/-	25.8/23.8
	21	epicondyl. breadth	80/-	-/-	-/-	-/-	-/-	80.0/-	-/-	71/-	-/-	71.0/-	-/-	-/-	75.5/-
	(6+7)/2	massiveness index	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
	8/2	solidity index	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
	6/7	pilastric index	85.2/92.3	107/109	-/-	-/-	124/-	105.4/100.7	-/-	108/100	-/82.7	108.0/91.4	-/-	-/-	106.7/96.1
	10/9	platymetric index	-/75.7	68.4/64.1	-/-	-/-	77.1/71.6	72.8/70.5	-/-	80.6/71.9	-/67.7	80.6/69.8	-/-	-/-	76.7/70.2

[74] *Ibidem.*

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Table 2. (continued)

	Martin No.	Character	MALES						FEMALES				UNDETERMINABLE		General average
			T_7, G_3	T_7, G_4	T_7, G_5	T_{7A}, G_2	T_{7B}, G_2	Male average	T_7, G_1	T_7, G_2	T_{7A}, G_1	Female average	T_{7A}, G_3	T_{7B}, G_1	
			18/20 years	35/40 years	40/45 years	45/50 years	35/40 years		40/45 years	55/60 years	35/40 years		6/7 years	1,5/2 years	
Tibia	1	length	363/-	-/408	-/-	-/-	-/-	363.0/408.0	-/-	-/-	-/-	-/-	-/-	-/-	363.0/408,0
	8	sagittal midshaft diam.	30/30	37/38	-/-	-/-	34/-	33.7/34.0	-/-	27/29	24/24	25.5/26.5	-/-	-/-	29.6/30,3
	9	transv. midshaft diam.	22/21	25/23	-/-	-/-	19/-	22.0/22.0	-/-	19/19	17/17	18.0/18.0	-/-	-/-	20.0/20,0
	8a	sagittal diam. nutr. foram.	31/33	43/41	-/-	-/-	39/-	37.7/37.0	-/-	31/32	29/-	30.0/32.0	-/-	-/-	33.9/34,5
	9a	transv. diam. nutr. foram.	21/21.5	24/21	-/-	-/-	21.5/-	22.2/21.3	-/-	21/21	19/-	20.0/21.0	-/-	-/-	21.1/21,2
	10b	min. circumf.	74/75	86/83	-/-	-/-	84/-	81.3/79.0	-/-	69/70	65/65	67.0/67.5	-/-	-/-	74.2/73,3
	10b/1	solidity index	20.4/-	-/20.3	-/-	-/-	-/-	20.4/20.3	-/-	-/-	-/-	-/-	-/-	-/-	20.4/20,3
	9/8	section index	73.3/70.0	67.5/60.5	-/-	-/-	55.9/-	65.6/65.3	-/-	70.4/65.5	70.8/70.8	70.6/68.1	-/-	-/-	68.1/66,7
	9a/8a	platycnemic index	67.7/65.1	55.8/51.2	-/-	-/-	55.1/-	59.5/58.2	-/-	67.7/65.6	65.5/-	66.6/65.6	-/-	-/-	63.1/61,9
Fibula	1	max. length	-/-	391/393	-/-	-/-	-/-	391.0/393.0	-/-	-/-	-/-	-/-	-/-	-/-	391.0/393,0
	2	sagittal midshaft diam.	11/-	15/16	-/-	20/-	-/-	15.3/16.0	-/-	12/11	11/11	11.5/11.0	-/-	-/-	13.4/13,5
	3	transv. midshaft diam.	14.5/-	14/12	-/-	14/-	-/-	14.2/12.0	-/-	15/14	13/13	14.0/13.5	-/-	-/-	14.1/12,8
	4a	min. circumf.	36/-	40/41	-/-	-/-	-/-	38.0/41.0	-/-	35/32	-/-	35.0/32.0	-/-	-/-	36.5/36,5
	4a/1	solidity index	-/-	10.2/10.4	-/-	-/-	-/-	10.2/10.4	-/-	-/-	-/-	-/-	-/-	-/-	10.2/10,4
Stature	Manouvrier		1652	1784	-	-	-	1718	-	-	-	-	-	-	1718
	Trotter-Glesser		1707	1811	-	-	-	1759	-	-	-	-	-	-	1759
	Bach-Breitinger		1685	1787	-	-	-	1736	-	-	-	-	-	-	1736
	Average stature		1681	1794	-	-	-	1737	-	-	-	-	-	-	1737

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Table 3. Grouping of skeletons according to sex and age at death. Tumuli nos. 7, 7A, 7B (10 individuals) versus tumulus no. 3 (21 individuals)

Sex/age (years)	Males T_7, T_{7A}, T_{7B}		Males T_3		Females T_7, T_{7A}, T_{7B}		Females T_3		Undeterminable T_7, T_{7A}, T_{7B}		Undeterminable T_3		Total T_7, T_{7A}, T_{7B}		Total T_3	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Infans I (0-7)	-	-	-	-	-	-	-	-	2	20.0	1	4.8	2	20.0	1	4.8
Infans II (7-14)	-	-	-	-	-	-	-	-	-	-	2	9.5	-	-	2	9.5
Juvenis (14-20)	1	10.0	3	14.3	-	-	-	-	-	-	2	9.5	1	10.0	5	23.8
Adultus (20-30)	-	-	2	9.5	-	-	-	-	-	-	1	4.8	-	-	3	14.3
Maturus (30-60)	4	40.0	4	19.0	3	30.0	-	-	-	-	-	-	7	70.00	4	19.0
Senilis (60-x)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Undeterminable	-	-	1	4.8	-	-	2	9.5			3	14.3	-	-	6	28.6
Total	5	50.0	10	47.6	3	30.0	2	9.5	2	20.0	9	42.9	10	100.0	21	100.0

Table 4. Mortality and life expectancy. Tumuli nos. 7, 7A, 7B (10 individuals) versus tumulus no. 3 (13 individuals)

Age interval	Number of individuals (Dx)		Proportion of deaths, % (dx)		Survivorship (lx)		Probability of death (qx)		Average years per individual lived within age interval (Lx)		Sum of average years lived within current and remaining age intervals (Tx)		Average life expectancy (e°x)	
	T_7, T_{7A}, T_{7B}	T_3	T_7, T_{7A}, T_{7B}	T_3	T_7, T_{7A}, T_{7B}	T_3	T_7, T_{7A}, T_{7B}	T_3	T_7, T_{7A}, T_{7B}	T_3	T_7, T_{7A}, T_{7B}	T_3	T_7, T_{7A}, T_{7B}	T_3
0-4	1		10.00	0.00	100.00	100.00	0.1000	0.0000	475.00	500.00	3300.00	2673.07	33.00	26.73
5-9	1		10.00	0.00	90.00	100.00	0.1111	0.0000	425.00	500.00	2825.00	2173.07	31.39	21.73
10-14		2		15.38	80.00	100.00		0.1538	400.00	461.54	2400.00	1673.07	30.00	16.73
15-19	1	4	10.00	30.77	80.00	84.62	0.1250	0.3636	375.00	346.15	2000.00	1211.53	25.00	14.32
20-24		2		15.38	70.00	53.85		0.2857		230.77		865.38	23.21	16.07
25-29		1		7.69	70.00	38.46		0.2000		173.08		634.61	18.21	16.50
30-34				0.00	70.00	30.77		0.0000		153.85		461.53	13.21	15.00
35-39	3	1	30.00	7.69	70.00	30.77	0.4286	0.2500	275.00	134.62	575.00	307.69	8.21	10.00
40-44	2		20.00	0.00	40.00	23.08	0.5000	0.0000	150.00	115.38	300.00	173.07	7.50	7.50
45-49	1	3	10.00	23.08	20.00	23.08	0.5000	1.0000	75.00	57.69	150.00	57.69	7.50	2.50
50-54				0.00	10.00	0.00				0.00			7.50	
55-59	1		10.00	0.00	10.00	0.00	1.0000		25.00	0.00	25.00		2.50	
60-64				0.00		0.00				0.00				
65-69				0.00		0.00				0.00				
Total	10	13												

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Table 5. The presence of anomalies, pathologies and epigenetic (non-metrical) traits

ANOMALIES/PATHOLOGIES/EPIGENETIC TRAITS			MALES (5 skeletons)		FEMALES (3 skeletons)		TOTAL (8 skeletons)	
			N	%	N	%	N	%
	pathologies	*in vivo* tooth loss	2/5	40.0	-	-	2/8	25.0
		dental supragingival calculus/tartar	1/5	20.0	1/3	33.3	2/8	25.0
		orbital osteoid osteoma	1/5	20.0	-	-	1/8	12.5
		osteoarthritis (osteophytes, enthesophytes)	1/5	20.0	-	-	1/8	12.5
	anomalies and epigenetic traits	metopism	1/5	20.0	-	-	1/8	12.5
		Wormian bones	1/5	20.0	-	-	1/8	12.5
		supraorbital complete foramen	2/5	40.0	2/3	66.7	4/8	50.0
		supraorbital notch	4/5	80.0	1/3	33.3	5/8	62.5
		exsutural mastoid foramen	2/5	40.0	1/3	33.3	3/8	37.5
		parietal foramen	2/5	40.0	-	-	2/8	25.0
		zygomaticofacial foramen (double/multiple)	2/5	40.0	-	-	2/8	25.0
		auditory torus	2/5	40.0	-	-	2/8	25.0
		mandibular torus	1/5	20.0	-	-	1/8	12.5
	pathologies	osteoarthritis (Schmorl's nodes, osteophytes, enthesophytes, corrosion, pronounced muscles insertion)	5/5	100.0	1/3	33.3	6/8	75.0
		Harris lines	2/5	40.0	-	-	2/8	25.0
	anomalies and epigenetic traits	retroarticular bridge/spur on the atlas	1/5	20.0	-	-	1/8	12.5
		accessory transverse cervical foramen	1/5	20.0	-	-	1/8	12.5
		sternal hypoplasia	1/5	20.0	-	-	1/8	12.5
		congenital rib fusion	1/5	20.0	-	-	1/8	12.5
		costoclavicular sulcus	1/5	20.0	-	-	1/8	12.5
		supratrochlear foramen of the humerus	1/5	20.0	2/3	66.7	3/8	37.5
		the third trochanter of the femur	1/5	20.0	-	-	1/8	12.5
		squatting facets on the tibia	2/5	40.0	1/3	33.3	3/8	37.5
		talar extension	1/5	20.0	-	-	1/8	12.5
		preauricular sulcus	1/5	20.0	1/3	33.3	2/8	25.0

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AN ARCHAEOLOGICAL-ANTHROPOLOGICAL-ARCHAEOZOOLOGICAL STUDY REGARDING THE SKELETON IN BURIAL NO. 3 FROM RADOVANU-*GORGANA ÎNTÂI*, BELONGING TO THE EARLY BRONZE AGE

ALEXANDRA COMŞA, ION TUŢULESCU, GEORGETA EL SUSI

Keywords: Early Bronze Age, Radovanu-*Gorgana întâi*, burial, anthropology, archaeozoology.

Abstract: the paper refers to the excavations from Radovanu. In the Eneolithic *tell*, beneath the Getic defensive wall, it was found the Burial no. 3, containing a skeleton assigned to the Yamnaya culture, which belonged to a man, aged about 25-30 years. The individual was buried together with nine animal bones, which, according to the archaeozoological study, have been assigned to the following taxa: pig, sheep, goat, dog, hen and a freshwater fish species, most probably carp. Of these, just the sheep tibia seems to have been used as an offering, the remaining bones being without food value.

Cuvinte cheie: Bronz Timpuriu, Radovanu-*Gorgana întâi*, mormânt, antropologie, arheozoologie.

Rezumat: lucrarea se referă la săpăturile arheologice de la Radovanu. În *tell*-ul eneolitic, sub valul de apărare getic, a fost descoperit Mormântul nr. 3, ce conţinea un schelet atribuit culturii Yamnaya, aparţinând unui bărbat, cu vârsta între 25-30 de ani. Individul a fost înmormântat împreună cu nouă oase de animale care, conform studiului arheozoologic, au fost atribuite următorilor taxoni: porc, oaie, capră, câine, găină şi o specie de peşte de apă dulce, probabil crap. Dintre acestea, doar tibia de oaie pare să fi servit drept ofrandă, restul fiind fără valoare nutritivă.

General aspects

Initiated in 2007[1], the excavations in the Eneolithic *tell* from Radovanu have been continued in 2011[2]. Subsequently the *tell* it was used by the Getae for raising a *dava* (fig. 1). Beneath the Getic defensive wall[3], ***Burial no. 1*** has been excavated in 2008 and published by us[4]. ***Burial no. 3,*** discovered in this campaign, was found in the same place[5]. The complex was detected 4.30 m east from ***Burial no. 1***, on the southern profile of the magistral trench (S.1). ***Burial no. 3*** was found on a depth of 0.90 m inside the cross-section, cutting through the layer of the Cernavodă I and that of the Gumelniţa cultures. For the investigation of this funerary find, a square of 1.50 x 1.50 m has been opened and crossed the Getic defensive earthen wall.

Stratigrafically, the pit (of a rectangular shape) has been dug beneath the northern base of the wall. The legs of the deceased have been destroyed by the Getic complex (***Pit no. 19/Burial no. 4***)[6]. The skeleton, with a south-north orientation was supine, with the head fallen aside on the right, to the east (figs. 2, 3).

Description of the Burial no. 3 made during the field research

The skeleton is supine, with the head to the south and legs to the north. The right side was lower than the left one, the body being inclined towards that part.

In our opinion the bottom of the pit was not flat, or the body had been wrapped into a textile which was decomposed.

[1] Şerbănescu *et alii* 2012a, 105 ff.

[2] Şerbănescu *et alii* 2012b, 112 ff.

[3] Şerbănescu *et alii* 2012a, figs. 15-16.

[4] Comşa *et alii* 2012.

[5] The investigations carried out in 2012 have resulted in the discovery of other funerary monuments, but these belong to other epochs. See Şerbănescu *et alii* 2013, 112.

[6] Şerbănescu *et alii* 2012b, 112.

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Fig. 1. Radovanu-*Gorgana întâi* – general view of the site.

Fig. 2. Burial no. 3 – general view.

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The skull

- Fallen aside, on the right side;

- The mandible fallen down, just as if the deceased would have had the mouth opened.

We assumed that the movement of the skull was determined either by the existence of an opened space, or placed on something which has been decomposed in time.

The post-cranial skeleton

Clavicles

– the left one is missing.

The rib cage

- is not symmetrical;

- the ribs on the right side are detached from the spine, while those on the left have moved to the right from the spine;

- the volume of the rib cage was not maintained, the ribs being flattened and in oblique position.

The hip bone

- widely opened, its parts being displaced. The epiphyses of the femora remained in their sockets.

The arms

- the left one was bent from the elbow, with the fingers on the right hip. Two phalanges have been found on the lower right side of the coxal bones;

- the right arm was along the body.

Near the right scapula it was found a miniature vessel of truncated shape. The vessel was atypical, rudimentary modelled and could not be culturally assigned by its typology.

Anthropological analysis

Material and methods

For the measurements and indices of the bones have been used the criteria established by R. Martin and improved by K. Saller[7]. For assigning the individual to a specific sex have been used the "*Recommendations...*" advanced by D. Ferembach, I. Schwidetzky and M. Stloukal[8], while the age has been established by using also the dental schemes of Brothwell[9], Lovejoy[10] and Zubov[11].

Fig. 3. Closer view of the Burial no. 3.

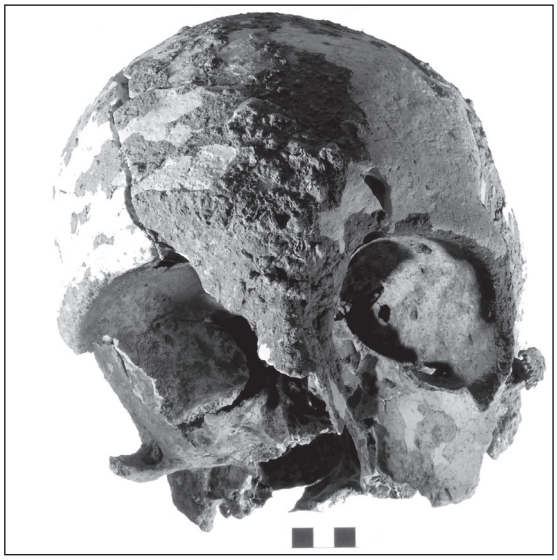

Fig. 4. *Norma frontalis* of the skull belonging to the skeleton in Burial no. 3.

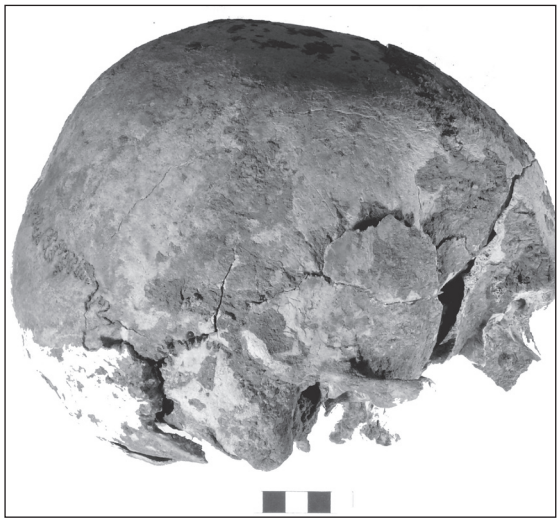

Fig. 5. *Norma lateralis* of the skull belonging to the skeleton in Burial no. 3.

[7] Martin, Saller 1957, 429-597.

[8] Ferembach *et alii* 1980, 517-549.

[9] Brothwell 1981.

[10] Piontek 1996.

[11] Kislyi, Kapritsyn 1994, 49.

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Fig. 6. *Norma verticalis* of the skull belonging to the skeleton in Burial no. 3.

Fig. 7. Palate of the skeleton in Burial no. 3.

Fig. 8. Frontal view of the fragmentary mandible belonging to the skeleton in Burial no. 3.

Cranial skeleton

The skull is almost complete (figs. 4-6). It belongs to the dolichocranian, hypsicranian and acrocranian categories and it has missing parts on the right side of the facial massif, which is eurimetop. It underwent a slight deformation due to the pressure of the soil, which resulted in the slight movement of the facial massif to the left. The forehead is an intermediary one, the occipital being large and very bulging. The orbits are chamaeconch.

The palate is complete (fig. 7), has an ellipsoid shape, a medium depth and the central incisor on the left side is missing. It belongs to the brachystaphilin category.

The mandible is represented by a fragment between the P.2 on the right and M.3 on the left demiarch (figs. 8-10). The mandibular body is rather high, with a prominent mental protuberance, pyramid-shaped and well outlined. Also, the digastric muscle insertions are well defined.

Post-cranial skeleton

Few vertebral bodies of the dorsal and lumbar regions, but also small fragments of ribs and scapula have been recovered. The right clavicle is almost entirely preserved, excepting the end for articulating with the sternum, which is damaged. Two complete phalanges of the hand have been also found.

The coxal bones and the *sacrum* are in a fragmentary condition. On the coxal bones it could be observed the narrow opening of the sciatic notch, feature specific to the male sex (fig. 12).

The long bones of the limbs are either incomplete, or have their ends damaged (figs. 11, 13).

The right upper limb

All the long bones of this limb have been found. The humerus has its ends deteriorated, while the radius and ulna are represented just by parts of diaphyses. The deltoid muscle insertion on the humerus is well outlined.

The left upper limb

It is represented by all three long bones, but the humerus and ulna have deteriorated ends. The only complete bone is the radius. Together with the long bones, five metacarpals and two phalanges have been also found.

On the humerus it could be observed the well defined insertion of the deltoid muscle. Both humeri belong to the euribrach category.

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The right lower limb

These bones have been found some distance away from the rest of the skeleton. The femur has its ends broken, the tibia has the region of the metaphyses damaged on its surface and the fibula is represented by a fragment of the diaphysis.

The left lower limb

It is represented by the femur and tibia. The first bone has its proximal end partly destroyed. The tibia has its distal end “eroded”. Given this deterioration on the antero-inferior surface of the bone, it could not be established if the squatting facets existed there. Both femora are eurimeric and have a high pilastric index.

Sex and age diagnosis

Considering the development of the cranial relief, together with the characters of the coxal bones, we could say that the skeleton has belonged to a man.

Based on dentition, it could be concluded that the respective individual had the age of 25-30 years by Brothwell, 24-30 years by Lovejoy and 25-35 by Zubov. The most probable age was of 25-30 years.

Stature

Given that just the radius has been preserved in one piece, it was the only bone that could serve to the height calculation. Based on the methods we used for doing this, by Manouvrier the individual has 1696 cm, by Trotter and Gleser 1750 cm and by Breitinger 1720 cm. The average height has reached 1722 cm, which enabled us to place the individual in the category of high statures by using the dimorphic scale of Alexseev and Debetz[12].

Typology

The mandible has a rather high horizontal ramus, and this character, together with the high stature of the individual enabled us to assign the skeleton to the nordic type. Still, its great robustness as well as the chamaeconch orbits plead to the protoeuropoid one. In fact, this is a mixture of those two types and this is why we could consider the individual as being of a protonordic type.

Other depositions

Together with the human bones from the burial could be also found some animal ones, some of them bearing traces of burning.

Taphonomic aspects

On the human bones there were thick mineral concretions determined by the long stay of the

[12] Alexeev, Debetz 1964.

Fig. 9. Lateral view of the fragmentary mandible belonging to the skeleton in Burial no. 3.

Fig. 10. Upper view of the fragmentary mandible belonging to the skeleton in Burial no. 3.

Fig. 11. Long bones of the upper limbs belonging to the skeleton in Burial no. 3.

Fig. 12. Coxal bones of the skeleton in Burial no. 3.

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Fig. 13. Long bones of the lower limbs belonging to the skeleton in Burial no. 3.

skeleton in a wet and rich in limestone environment. There were no traces of ochre on the bones.

Conclusions of the anthropological analysis

This skeleton surely belongs to the steppic populations, which had the custom of interring their dead in older tumuli. In fact, other individuals could be also found in this Eneolithic *tell*. Such an example would be the skeleton in ***Burial no. 1***. In fact, the comparison made between these two individuals has shown that when just the measurements considered, these two skeletons have nothing in common. On the other hand, when we look at the indices, they belong to the same categories, which means that they are not very remote from each other[13].

Archaeozoological study

The filling of the ***Burial no. 3*** provided nine animal bones, of which one could not be exactly assigned to species, being a splinter from a large mammal.

[13] See table no. 1 in the present paper and table with the measurements of the skull from Radovanu (M.1/2008), in Comşa *et alii* 2012, 36.

Table no. 1. Measurements and indices of the skull (Skeleton no. 3/2011)

No. Martin	Measurements / Cranial indices	
1	g-op	191
2	g-l	185
3	g-i	180
8	eu-eu	134
9	ft-ft	94
10	co-co	109
11	au-au	102
12	ast-ast	110
13	ms-ms	86
20	po-b	125
23	Horizontal circumference of the skull	544
24	po-po	340
25	n-o	402
26	n-b	144
27	b-l	136
28	l-o	122
28.1	l-i	73
28.2	i-o	50
29	n-b	131
30	b-l	119
31	l-o	100
31.1	l-i	69
31.2	i-o	38
	l-op	41
	op-o	67
43	fmt-fmt	107
43.1	fmo-fmo	96
44	ek-ek	98
50	mf-mf	15
51	mf-ek	45
52	Orbit height	34
62	ol-st	47
63	enm2-enm2	44
63.3	Width of the palate	64
69	id-gn	34
69.1	Height at the level of the mental foramen	35
69.3	Thickness at the level of the mental foramen	11
70	Height of the vertical ramus	72
70.3	Height of the mandible notch	11
71	Width of the mandible vertical ramus	34
79.4	Basal angle	110
79.3	Vertical ramus angle	112
79.4	Mental protuberance angle	73
Indices		
	8/1 cephalic index	70.2
	17/1 vertico-longitudinal index	0.0
	17/8 vertico-transversal index	0.0
	20/1 porio-longitudinal index	65.4
	20/8 porio transversal index	93.3
	9/10 fronto-transversal index	86.2
	9/8 fronto-parietal index	70.1
	12/8 parieto occipital transversal index	82.1
	27/26	94.4
	29/26 fronto-sagital index	91.0
	30/27 parietal curvature index	87.5
	31/28 occipital curvature index	82.0
	31.1/28.1	94.5
	l-op/l-i	56.2
	52/51 orbitar index	75.6
	50/44	15.3
	63/62 palate index	93.6
	45/8 zygo-parietal index	145.5
	9/43	87.9
	31.2/31.1	55.1
	28.2/28.1	68.5
	71/70	47.2
	69.3/69.1	31.4

Table no. 2. Measurements and indices of the humeri Skeleton no. 3/2011)

No. Martin	Right upper limb	
5	Average maximal diameter.	23
6	Average minimal diameter.	20
	Cross-section index	86.96

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Table no. 2 (continued)

	Left upper limb	
5	Average maximal diameter.	23
6	Average minimal diameter	20
7	Minimal perimeter	81
	Cross-section index	86.96

Table no. 3. Measurements and indices of the radiuses (Skeleton no. 3/2011)

No. Martin	Right upper limb	
3	Minimal perimeter	53
4	Transversal diameter	16
5	Antero-posterior diameter	12
	Cross-section index	75.00
	Left upper limb	
1	Maximal length	253
3	Minimal perimeter	53
4	Transversal diameter	16
5	Antero-posterior diameter	12
	Robustness index	20.95
	Cross-section index	75.00

Table no. 4. Measurements and indices of the ulna (Skeleton no. 3/2011)

No. Martin	Right upper limb	
11	Antero-posterior diameter	14
12	Transversaldiameter	18
	Cross-section index	77.78
	Left upper limb	
11	Antero-posterior diameter	15
12	Transversal diameter	18
	Cross-section index	83.33

Table no. 5. Measurements and indices of the femora (Skeleton no. 3/2011)

No. Martin	Right lower limb	
6	Average antero-posterior diameter	32
7	Average transversal diameter	27
8	Average perimeter	100
9	Upper transversal diameter	31
10	Upper.ant.-post.sup. diameter	27
	Pilastric index	118.52
	Platimeric index	87.10
	Left lower limb	
1	Maximal length	462
2	Morphological length	461
6	Average antero-posterior diameter	29
7	Average transversal diameter	26
8	Average perimeter	93
9	Upper transversal diameter	31
10	Upper anero-posterior diameter	27
	Massiveness index	11.93
	Robustness index	20.17
	Pilastric index	111.54
	Platimeric index	87.10

Table no. 6. Measurements and indices of the tibiae (Skeleton no. 3/2011)

No. Martin	Right upper limb	
1	Maximal length	
3	Minimal perimeter	53
4	Transversal diameter	16
5	Antero-posterior diameter	12
	Cross-section index	75.00
	Left upper limb	
1	Maximal length	253
3	Minimal perimeter	53
4	Transversal diameter	16
5	Antero-posterior diameter	12
	Robustness index	20.95
	Cross-section index	75.00

The identification of the other eight fragments (marked by NISP in Tab. 1) is given below: portion from a right pig mandible, originating in a specimen 13-18 months old (cf. M3 in crypt, M2 wear stage- b), length of M2 is 20.5 mm (fig. 14/d); a pig proximal phalanx (fig. 14/e) from the second digit (front limb); the proximal end apart from a cattle phalanx I (fig. 14/a), originating in a sub-adult specimen (less than two years); phalanx I from a goat, proximally not fused (fig. 14/g), from a juvenile (less than 7-10 months); an incomplete right zygomatic bone from a dog (fig. 14/f); an incomplete left tibia (proximal end is missing) from a sheep, with Bd/Dd 26/20 mm (fig. 14/h). The fragments originate in an individual older than 1-2 years; a fragment from pelvic girdle of a hen (fig. 14/c) and an opercular broken in three parts from freshwater fish, perhaps carp (fig. 14/b).

The tibia from *Ovis* is whitish on the front side and yellow-reddish on the back one, rather suggesting contact with fire. Due to a slight burning on the front, the periosteum is exfoliated on a small area. A

Table 1. Distribution of bones to taxa

Taxon	NISP	MNI
Ovicaprids	2	2
Sus s. domesticus	2	1(2)
Bos taurus	1	1
Canis familiaris	1	1
Gallus domestica	1	1
Pisces	1	1
Unidentified	1	
Total	9	7 (8)

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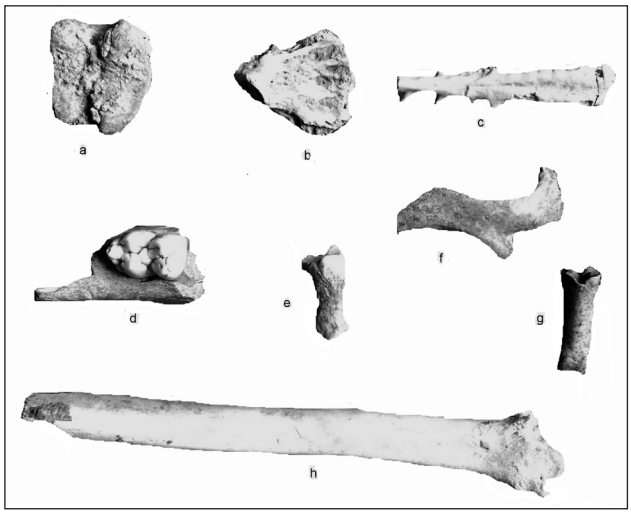

Fig. 14. Animal bones discovered in Burial no. 3.

slight reddish pigmentation was found on the fish opercular, as well. The bone from hen differs from the others by its light colour and no calcifications. Probably it was fossilized in another environment, something dry. On a careful observation, two parallel incisions on the lumbosacral bone are visible, probably done to disjoint it. The piece might have come from the Dacian level, knowing that the taxon is common in the La Tène habitation from Radovanu. The remaining sample is darker in colour, with deposits of calcium, due to the wet conditions of fossilization. According to the anthropologist's information, they look alike the human bones from the grave.

Conclusions of the archaeozoological study

None of the bones seems to indicate a special function, that of being a meat offering, for several reasons: the waste come from several skeletal parts without any food value (dog zygomatic, pig mandible, phalanges). The sample suggests at least seven individuals, too many for an offering. There are no articulated bones. Hypothetically, only the sheep tibia could have come from a meat offering. Unfortunately, we do not think that our analysis would shed any light on the presence of the animal bones in the mentioned context. The identified taxa are common both to Eneolithic, Bronze Age and Dacian habitations and the few metric data cannot distinguish among them.

***

If after the discovery of Burial no. 1 on the *Gorgana întâi* from Radovanu we were tempted to consider the funerary monument as belonging to a steppic population of the Early Bronze Age, that is an interesting aspect but with lesser significant implications, the find of a second such interment (*Burial no. 3*) belonging to the same time and cultural sequence imposed further exploitation of the data.

Those two interments, with the characteristics of the Yamnaya burials in its early phase have their skeletons supine with upraised knees[14]. During the anthropological analysis of the Burial no. 1 some comparisons and analogies with similar discoveries have been done[15]. To all these some others discoveries could be added, like those from Sultana, Călăraşi County, recently published[16].

In a comparison with the skeleton series from Smeeni, for instance, we could find a close value of the cranial index for the individual in Burial no. 3 from Radovanu with the one in Burial no. 16 from the first mentioned site (70,2 and 70,9). Still, if we take a look at the measurements for both skeletons we could observe that the skull of the individual in Burial no. 3 from Radovanu has much smaller dimensions compared with the one in Burial no. 16 from Smeeni. On the other hand, both of them preserve protonordoid features, in the case of the last mentioned skeleton series being possibly a mixture between the protoeuropoid and the nordoid types, or simply an evolution from the former to the latter one, as shown by the anthropologists who studied the individuals from Smeeni[17].

We have also compared this skeleton (in Burial no. 3 from Radovanu) with the series from Glăvăneştii Vechi, Stoicani-*Cetăţuie* and Corlăteni, also belonging to the bearers of the tumular ochre burials. We have found just some resemblances concerning part of the cranial measurements with the individual in Burial no. 13 from Stoicani-*Cetăţuie*, which was assigned to a male *senilis* (over 60 years) individual[18].

The comparison with the skeleton series from Sultana-*Movila Mare* has provided no analogies. In fact, a drawback of this enterprise was the bad preservation of the skeletons. Out of the five individuals, just for the one in Burial no. 3 some measurements could be done and some indices on the skull could be calculated[19].

The same lack of analogies we could observe when we compared the individual in Burial no. 3

[14] A synthetic introduction in this sense see at Schuster *et alii,* 2011, 78 f. and Schuster 2012. An extended discussion has been recently done by I. Motzoi-Chicideanu (2011, 225 ff.).

[15] Comşa *et alii* 2012, 31-38.

[16] Şerbănescu, Comşa 2012.

[17] Necrasov *et alii*, 1964, 18 and 27 with table no. 1.

[18] Haas, Maximilian 1958, with tables of the measurements and indices.

[19] Comşa 2008, 45-56.

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from Radovanu with the Holboca skeleton series[20]. In fact, this was the result that we expected, as it is obvious that many skeletons from Holboca manifested more archaic features than those from Radovanu.

In the human osteological materials dated back in the Middle Bronze Age, discovered in the tumulus from Vânători and comprising ochre burials, we could notice the very similar measurements between skeleton in Burial no. 2 and the one under discussion here, even if the cranial index is slightly different (71,8). This difference is given by the *eu-eu* dimension, which is bigger than the same measurement of the skeleton in Burial no. 3 from Radovanu (138 and 134). This means that the first mentioned individual has a slightly larger skull than the latter and it belonged to an attenuated protoeuropoid.

The Yamnaya burials have been usually discovered in tumuli. These formations have been initially raised for one, or several main interments, being subsequently used by the Yamnaya or other groups, but also by some recent populations, for secondary interments. At Radovanu-*Gorgana întâi*, instead of the tumuli specific to this cultural phenomenon[21], the Yamnaya community has used a substitute, the Gumelniţa *tell* on that spot being utilized as a funerary mound. By digging the burial pits it was firstly cut the Cernavodă I[22] layer (with a thickness between 0.7-0.15 m), and then slightly penetrated the Gumelniţa one. It was a hazard that upon those two burials the Getic people had subsequently raised the defending wall of the *dava*.

The Yamnaya discoveries from Radovanu give us the confirmation that groups of this manifestation have followed the Danube course and afterwards went upstream on the Argeş, the same as they did on other interior waters of Muntenia and Oltenia, which flow into the mentioned river. Until now, other clear vestiges of this phenomenon have not been signaled in the basin of the Argeş river[23].

[20] Necrasov, Cristescu 1957, 75-146.

[21] In the region of the Radovanu village some tumuli have been identified, but they seem to have belonged to the Getic period, as shown by the materials published by Alexandru Vulpe (1976, 209).

[22] The Cernavodă I complexes (dwellings and pits) are concentrated on the terrace south of the *tell*, being separated by it through defending ditches of different epochs (prehistoric and Getic ones). The Gumelniţa constructions and several pits could be detected both on the *tell* and on the terrace.

[23] Regarding the archaeological investigations in the Lower Argeş basin, see Schuster, Popa 2008; Schuster, Popa 2010; Schuster, Popa 2012; Schuster, Popa, Barbu 2012.

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NEW ARCHAEOZOOLOGICAL RESEARCH IN MONTEORU CULTURE SITES FROM EASTERN ROMANIA

GEORGETA EL SUSI

Keywords: Monteoru Culture, Pietroasa Mică, wild taxa, elk, bison.

Abstract: The paper put into question recent data on the exploitation of animals in settlements of the Monteoru culture, located in eastern Romania, in the light of the samples from Costişa (Neamţ county) and Pietroasa Mică – *Gruiu Dării* (Buzău county). 8,535 bones were taken into consideration, of which 2,755 are from the settlements mentioned above, the rest from others already published. Statistics show that hunting would have had a minor role in economy, since in most sites wildlife remainders do not exceed 8.5%, excepting sites from Sărata Monteoru with 12% and Costişa with 28.8 %. Most settlements are situated in the Sub-Carpathian Hills area, management of large and small ruminants was favoured by location, the Monteoru tribes specializing in their exploitation. After a review of inter specific relations, assessments on morpho-dimensional features and age profiles of domestic species are emphasized.

Cuvinte cheie: Cultura Monteoru, Pietroasa Mică, specii sălbatice, elan, bizon.

Rezumat: Materialul pune în discuţie date recente asupra exploatării animalelor în aşezări ale culturii Monteoru, amplasate în sud-estul şi estul României, pornind de la eşantioanele faunistice de la Costişa (jud. Neamţ) şi Pietroasa Mică – *Gruiu Dării* (jud. Buzău). S-au avut în vedere ca. 8.535 oase, dintre care, 2.755 provin din aşezările mai sus-amintite, restul din altele deja publicate. Conform statisticilor, vânătoarea avea un rol minor în economia comunităţilor monteorene, în mai toate siturile resturile speciilor sălbatice nu depăşesc 8,5 %, cu excepţia locuirii de la Sărata Monteoru, cu 12% şi Costişa cu 28,8%. Majoritatea aşezărilor fiind amplasate în zona dealurilor subcarpatice, creşterea rumegătoarelor mari şi mici a fost avantajată de poziţia geografică, triburile monteorene specializându-se în exploatarea lor. După o trecere în revistă a raporturilor interspecifice, se fac aprecieri asupra trăsăturilor morfo-dimensionale şi asupra vârstelor de tăiere a speciilor domestice.

The paper aims to present recent data on livestock management in the settlements of the Monteoru culture, located in eastern Romania, according to new faunal samples from Costişa (Neamţ county) and Pietroasa Mică – *Gruiu Dării* (Buzău county). 8,535 bones were taken into consideration, of which 2,755 are from the above mentioned sites, the rest from others already published (Table 1, fig. 1). *Gruiu Dării* is the name of a promontory with an oval shape and a height of 534 m belonging to the hills of Istriţa, a unit of Buzău Sub-Carpathians, located between the Romanian Plain and the Buzău Mountains. Under massive it stretches the Istriţa Glacis, a plain with heights of 200-300 m, representing a stage of transition towards the Bărăgan low plain. Basically the area is a mixture of biotope belonging to both Sub-Carpathian chain (dominated by deciduous forests – durmast oak woods mixed with lime-tree, flowering-ash, and horn-beam) and steppe, including secondary meadows and agricultural crops[1]. On that height, which gave good foresight and excellent natural protection to the field, there were found remains of the Eneolithic (Cernavodă Ic and Cucuteni B), Bronze Age (Monteoru culture), the 4th-3rd c. BC (only a few complex) and La Tène epoch[2]. The Bronze Age habitation belongs to an early phase of Monteoru culture (circa 2400-2100 BC), starting in the phase Ic4-2, also developing during the phase Ic3[3]. The 2,130 animal bones were harvested from dwellings and waste pits, by excavations performed during 2001-2009 campaigns.

Below we present the main results of sample analysis from Pietroasele a detailed analysis, being in print. According to it, hunting has a reduced contribution in providing of some products as meat, fur, leather, and raw material for tools, the bones of wild species totalling 8.47%. Red deer prevails among the game meat, but its remains do not exceed 5% as fragments, in terms of number of individuals it reaches 7.48%. Overall, the wild mammals adapted to an open landscape (roe deer, aurochs and hare) come to the same percent of the red deer, 7.48% as NMI; so we can speak of the

[1] Posea *et alii* 1982, 321-322.

[2] Sîrbu *et alii* 2010.

[3] *Ibidem*.

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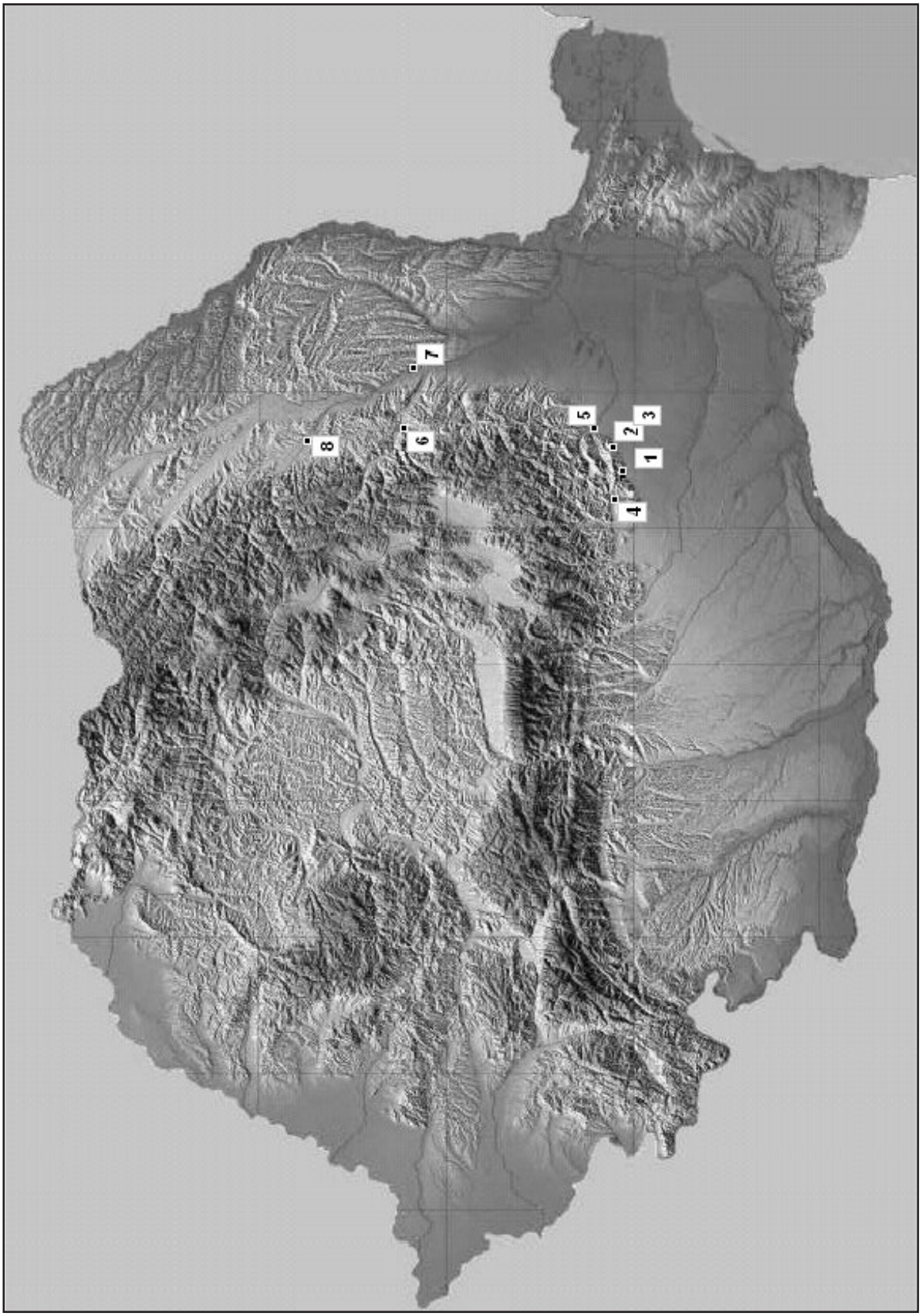

Fig. 1. Map of sites.

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existence of open areas in the surroundings of the settlement, conducive to their existence. In addition to mammals' aquatic resources, primarily fish were occasionally exploited. In this respect to note four freshwater fish fragments, one of them is a jaw fragment from pike. Cattle prevail with 36% as fragments and only 17% as NMI. Ovicaprids record a high frequency similar to that of bovine, 35.86%. It is worth pointing the higher percentage of bones of goats 15.77% compared to only 12.9% that of sheep. The cattle management was largely focused on by-products according to age class-distribution. Specifically, there are few individuals up to one year, about 8%, similarly until two years and about 45% until three years. Over this limit was identified only 37%. Therefore few slaughters of calves, more animals of 2-3 years old, and many animals used for many years were found. The small ruminants were an important source of meat, milk and wool as well. Slaughter of sheep and goats carries different patterns. In the case of goats, from the 25 individuals, an animal (4%) was killed between 0-2 months, five individuals between 2-6 months (20%) and five between 6-12 months (20%). There are six animals slaughtered between 1-2 years (24%), five individuals up to 4 years (20%) and three between 4-6 years (12%). Thus about 44% of lambs was killed for meat, slaughter were intense during the warmer season. A rate of 20% was preserved for meat supplying (individuals 1-2 years old), and a third one for milk and reproduction. The maximum exploitation of the species lasted up to six years. Of 24 sheep, one specimen (meaning 4.17%) is below two months, seven animals (29.2%) between 2-6 months, two (8.33%) between 6-12 months, four (16.75%) between 1-2 years, six (25%) between 2-4 years, and four (16.67%) over that limit. Therefore, the data confirm significant culling of lambs, from spring to summer (slaughter for meat, or in connection with certain rites of spring?). Then, the slaughter rate decreases during 6-12 months, corresponding to the first pregnancy and parturition; few killings of animals of two-three years (the slaughters aimed at males and females with reduced milk productivity. Circa 17% was preserved for wool and breeding. The wastes assigned to pig account for 16.29%, a closed value of 13.61% estimated as MNI. According to pig dentition it is estimated that of twenty specimens, about 25% were killed up to a year and 70% between 1-2 years, especially between 14-18 months. There is an animal 3-4 years old. The horse is still less exploited, it is quoted by 1.5%. It seems that horse was not used in consumption.

The other site under consideration is Costişa. It is located in the Depression-Bistriţa-Cracău, in the eastern edge of Costişa village, on a promontory broken away from the high terrace of the river Bistriţa. The landscape is dominated by medium altitudes, with terraces and alluvial plains covered by deciduous forests, containing mostly durmast and oak. Flood plain vegetation developed along the river valley. Much of these forests have been cut over time, their place being taken by secondary grasslands, meadows and crops[4]. 4,020 faunal remains belonging to Precucuteni – Phase III, Costişa and Monteoru cultures were collected during 2001-2008 campaigns. The two deposits of the Middle Bronze Age (Costişa and Monteoru cultures) were considered as a result of two communities which in turn occupied the plateau. Monteoru archaeological deposit covering Costişa complexes has a completely different structure. It consists of a consistent layer of stones between them, revealing the 33 fireplaces, hearths portions, vitrified clay, pots fragmentation (dated in Ic2-Ic1 Monteoru phase), various objects of metal, stone, clay, and many animal bones[5]. Monteoru arrangement is the result of a huge effort, which is, according to researchers a strong argument to give a special character to site[6]. Faunal remains belonging to this level come, almost entirely from the plateau A. From the plateau B, few bones were collected and they were not considered. The sample of 625 bones, of which 452 completely identified, is the lot of the Plateau A. Excepting two remnants of turtle and two valves of clam, the 621 pieces originate in a proportion of 71.2% in domestic mammals and 28.8% in the game. Of 322 identified fragments, 32.7% is the rate of cattle, 16.4% that of pig, 12.4% that of small ruminants, 8.2% that of horse and 1.5% the dog. In the slaughter of cattle, there is a percentage of 17.6% in 18 months, 35.3% between 2-3 years and 47% over 3 years. So a report sub-adult/ adult of 9/8 could also suggest the use of cattle also for meat, dairy, breeding and labour. Two proximal widened and slightly deformed phalanges may be evidence for the use of cattle as beasts of burden. Related to pigs, a rate of 22.2% is the animals, slaughtered up to one year, 33.3% to 44.5% two years and 2-3 years at most. A single individual may be beyond that stage. Obviously there are two cutting tips, one between 12-18 months, and another at 2-3 years, these moments are about to reach a certain optimum body weight for slaughter and keeping in mind of zootechnical parameters (sexual maturity, calving, etc.). 16.7% is the rate of juveniles, 50%

[4] Posea *et alii* 1982, 609-615.

[5] Popescu, Băjenaru 2008, 5-17.

[6] Vulpe, Popescu, Băjenaru 2006, 141.

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of the sub-adults and only 33.3% of the adult in small ruminants. Percentages clearly show an exploitation of meat production, while maintaining a certain stock, whether for reproductive or dairy; the report sheep/ goat with a value of 6/ 1 rather suggests the low importance given to goats in relation to sheep. It seems that the bones in the archaeological deposit derived primarily from animals cut since the end of spring to autumn. Old horses were not identified, with only sub-adult specimens or young adults. Certainly horse meat was consumed occasionally by the community. Wild mammals have a significant participation in the sample; it is a percentage of 28.8% as fragments, and 31.7% as the minimum number of individuals. Among the hunted taxa, the red deer has a majority share of 18.6% in the report of the NISP (no fragments) and 13.4% as MNI; it ranks the second as meet source after cattle. Indeed mention that I did not find any piece of horn, not even a waste processing, unlike the situation encountered in Precucutenian level, characterized by numerous remains of corn. Whether processing of this raw material was insignificant compared to Precucutenian times or red deer hunting was done mainly in the warm season, when males had horns cast. Or simply tools, processing waste were dumped elsewhere. The few data collected on the teeth suggests the preference of deer hunting in the summer. The boar is rated by 5.3%, 2% roe deer, 1.1% aurochs and hare, fox below 1%. A special mention for beaver, a common element of wildlife in the area, though its percentage is much lower (1.3%) from the Neolithic levels, where it reaches about 7%. In terms of number of individuals, we find the same high rate of 7.3% to Costişa, and 4.8% in Sărata Monteoru.

When referring to animal economy of Monteoru communities, even if the number of excavated settlements is large, in terms of faunal analyses, by now few lots of bones have been published. Except for Mândrişca sample with 3,859 fragments the others ones do not exceed 1,000 bones each one. Geographically, the sites are positioned in eastern part of Romania, in extra-Carpathian area. The sites no. 1-5 (numbering in table 1) are located into the Buzău zone, with environmental conditions similarly to those of Pietroasele. The sites from Moldova (no. 6-8) are also in the uplands, emphasizing bio-geographical patterns somewhat akin to those at Costişa. Obviously, there are some local peculiarities, at least in terms of temperature regime, rainfall, and type soil which made a particular impression. According to available data, the exploitation of animals reveals some features that I tried to sketch in the light of current data. Statistics show that hunting would have had a minor role in supply, since in most sites wildlife remainders do not exceed 8.5%, excepting sites from Sărata Monteoru with 12% and Costişa with 28.8%. Wildlife exploitation was diversified, despite lower percentages. Hunting focused on a large variety of mammals including: red deer, boar, roe deer, aurochs, beaver, hare, small carnivores, elk, and bison (Mândrişca and Bogdăneşti). Referring to domestic segment, three "*economic*

Table 1. Taxa frequencies in Monteoru sites

NISP	1	2	3	4	5	6	7	8
Cattle	36	40.14	42.1	28.2	48.3	52.46	63.07	32.7
Sheep/goat	35.82	22.9	43.8	46.3	26.7	18.78	11.68	12.4
Pig	16.29	13.38	11.6	15.4	16.4	16.69	14.96	16.4
Horse	1.56	5.44	0	0.3	6	0.59	0.89	8.2
Dog	1.86	5.67	1.4	3.8	0	4.18	1.15	1.5
Game	8.47	12.47	1.1	6	2.6	7.3	8.25	28.8
Total sample	**2,130**	**441**	**480**	**551**	**276**	**897**	**3,135**	**625**
MNI								
Cattle	17.01	18.07	28.6	19.4	36	30	40.23	20.7
Sheep/goat	38.77	22.89	28.6	27.8	24	22.22	5.47	14.6
Pig	13.61	20.48	23.8	19.4	24	18.89	31.65	22
Horse	3.4	4.82	0	2.8	8	2.22	1.95	7.3
Dog	3.4	9.64	9.5	5.6	0	6.67	2.73	3.7
Game	23.81	24.1	9.5	25	8	20	17.97	31.7

1: Pietroasa Mică – *Gruiu Dării*; 2: Sărata Monteoru (after Haimovici 1994); 3: Sărata Monteoru (after Becker 2000); 4: Năeni – *Zănoaga*; 5: Cârlomăneşti – *Arman*; 6: Bogdăneşti; 7: Mândrişca; 8: Costişa.

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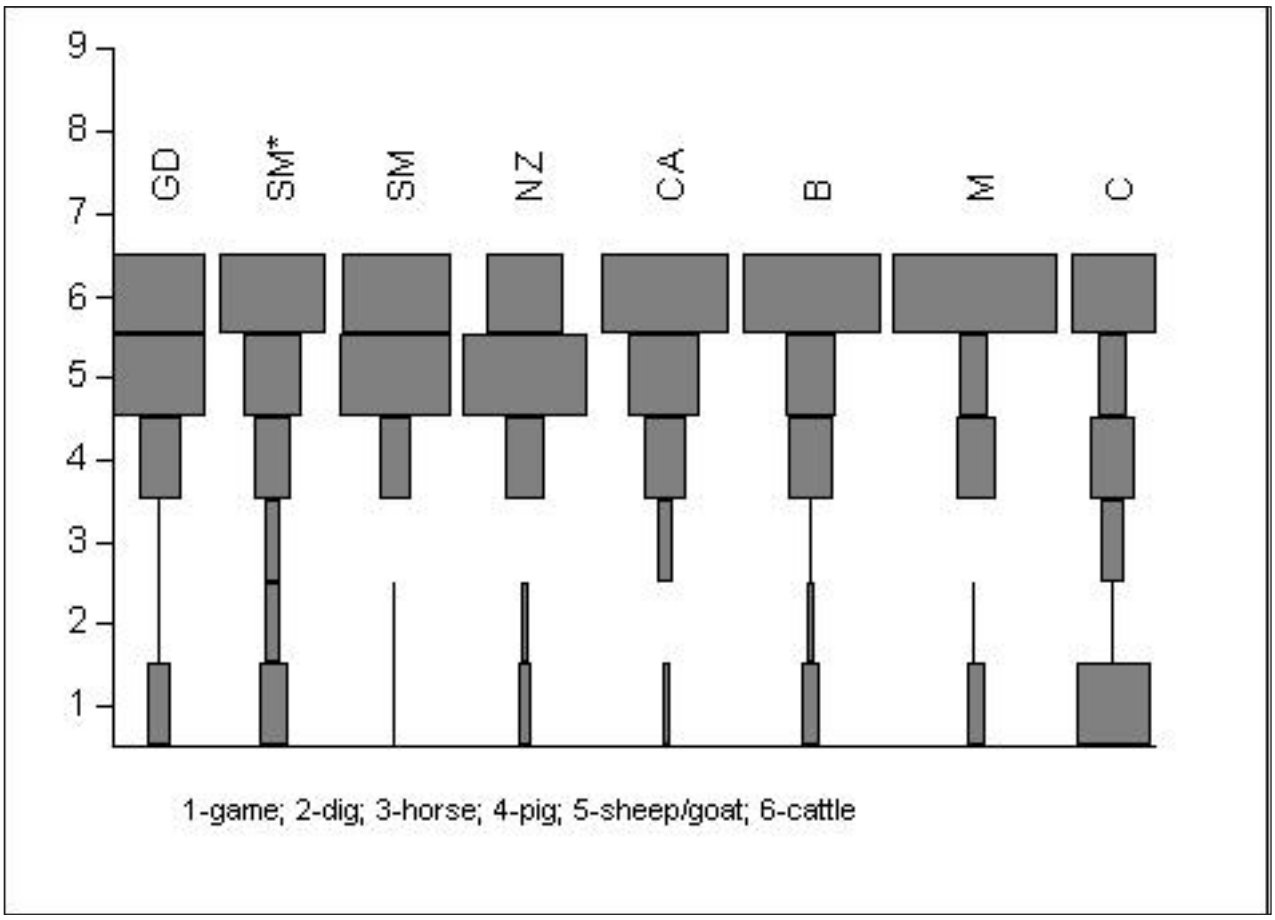

Fig. 2. Distribution of taxa in Monteoru settlements (sites order is presented in Tab. 1).

schemes" are predicted in terms of management of cattle, sheep/goat, pig and horse: 1. prevalence of bovines with a low rate of ovicaprids, up to half of cattle's frequency; 2. both species with similar value; 3. prevalence of small ruminants with lower rates of cattle. The first grouping includes sites with very high percentage of cattle, 48% at Cârlomăneşti – *Arman*, 52% at Bogdăneşti and 63% at Mîndrişca. Offsetting, the ovicaprids rate is reduced at 11-18% in sites from Moldavia and somewhat larger at Cârlomăneşti – *Arman* (27%). A sub-variant of this model, with a lower rate of cattle (about 40%) but prevailing versus 20% of sheep/goat was found at Sărata Monteoru and 32.7% cattle versus 12% sheep at Costişa (fig. 2).

The next class includes sites with similar rates of cattle and ovicaprids, Pietroasa Mică – *Gruiu Dării* – 36% and Sărata Monteoru – 42%. Finally, the last class includes settlements with dominance of small ruminants versus a low percent of bovines: Năeni-*Zănoaga* with 28% cattle and 46% ovicaprids is according to this pattern. In terms of MNI discrepancies are more pronounced: ovicaprids predominate in sites in the surroundings of Buzău, perhaps a little drier local climate would have influenced this choice. On the contrary their share is lesser in Moldavia, prevailing cattle. Pig rate is always the same, slightly varying between 15-17% and somewhat smaller at Sărata Monteoru (11.6%). Just in terms of number of individuals, figures range from 19 to 24% with a minimum of 13.6% to Pietroasele, and a maximum of 31.6% to Mândrişca. The horse is less exploited. It is worth emphasizing its high share at Costişa (8%) and Sărata Monteoru (5.44% as fragments) as compared to other settlements reaching less than 2%. The low quota of its bones may be explained by the fact that the Monteoru communities *"have not yet fully assimilated it in their economy, as a domestic animal"*[7]. Its use in food is incidental. A more special is the sites of Bogdăneşti and Sărata Monteoru, with many dog remains, 4.18% and 5.67%. As MNI the share is even higher, about 6.67% and 9.64%. "*Its high frequency may be correlated with the position of settlements in the Carpathian foothills, where they were abundant prey species (bear, wolf, lynx), so it was necessary to have more dogs to guard flocks*" according to the author. It would be a plausible explanation, but let's not forget that all sites were located in the Carpathian foothills, rich in wild taxa. Probably should be considered the sample size, their harvesting, etc. The exploitation of aquatic resources such as shellfish gathering and fishing

[7] Haimovici 1994, 316.

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made a small contribution to the diet without neglecting what was preserved of these remains, as well.

In terms of metric data, there is limited information on size and body conformation of domestic taxa. Referring to cattle horn-cores typology, few pieces were described in mentioned sites. A single piece of very small proportions, from a female ("*brahyceros*" type) was found at Pietroasele, a similar piece identifying at Bogdăneşti. The sample from Mândrişca and Bogdăneşti contained pieces with characteristics closer to the "*primigenius*" type (but not pure type), they were assigned to males. Costişa sample did not contain pieces to allow morpho-dimensional evaluations, only cracks of walls. In terms of height at the withers of cattle, the data partially cover the range size. For example, a value of 116.4 cm was identified in Costişa, suggesting a female; values of 109.7 cm and 119.3 cm (we recalculated the size, cf. Matolcsi coefficient) were obtained in Bogdăneşti, 107.3 cm in Cârlomăneşti-*Arman* and an average of 118.6 cm in Mândrişca. Values of 106.4 cm for cows and 134.4 cm for geld are assumed at Sărata Monteoru (average 115.4 cm). Overall, it is found a wide variation of 106.4 - 118.6 cm, with an average of 114.68 cm; obviously values are much lower compared to Eneolithic in the region. I argue by a comparison with data from the Eneolithic levels from Pietroasele and Costişa (fig. 3). It seems that cattle in the Monteoru settlements were of medium size, few of them reaching the lower limits of variation of the aurochs.

With regard to sheep and goats, body biometrics data indicates the following: goat is characterized by slightly curved horns, of "*prisca*" type, with plane-convex cross-section and convex toward top. Such type of horns was identified almost everywhere. Instead, a horn from a he-goat, with "*prisca*" features least sketched, was found to Mândrişca. However such pure aegagrus was not identified anywhere. Two horns of goats, one "*prisca*" and other featured "*aegagrus*" are found at Sărata Monteoru. Unfortunately there is little data on the size of the goat; one height of 71.2 cm was estimated at Sărata Monteoru and a lower value - 64.6 cm at Cârlomăneşti. Measurements of width of bones suggest specimens as robust as those from Eneolithic epoch. Regarding sheep, the sample offered little data on this topic. Both kinds of skulls, horn and acorn were found, the first type is predominant. Acorn females were identified only at Mândrişca. For information, to remember that a wether horn, with a length of 162 mm was identified in Sărata Monteoru. About castration of rams is also recalled when analysing material from Bogdăneşti. Height at withers based only on calcaneus and talus was estimated at Pietroasele,

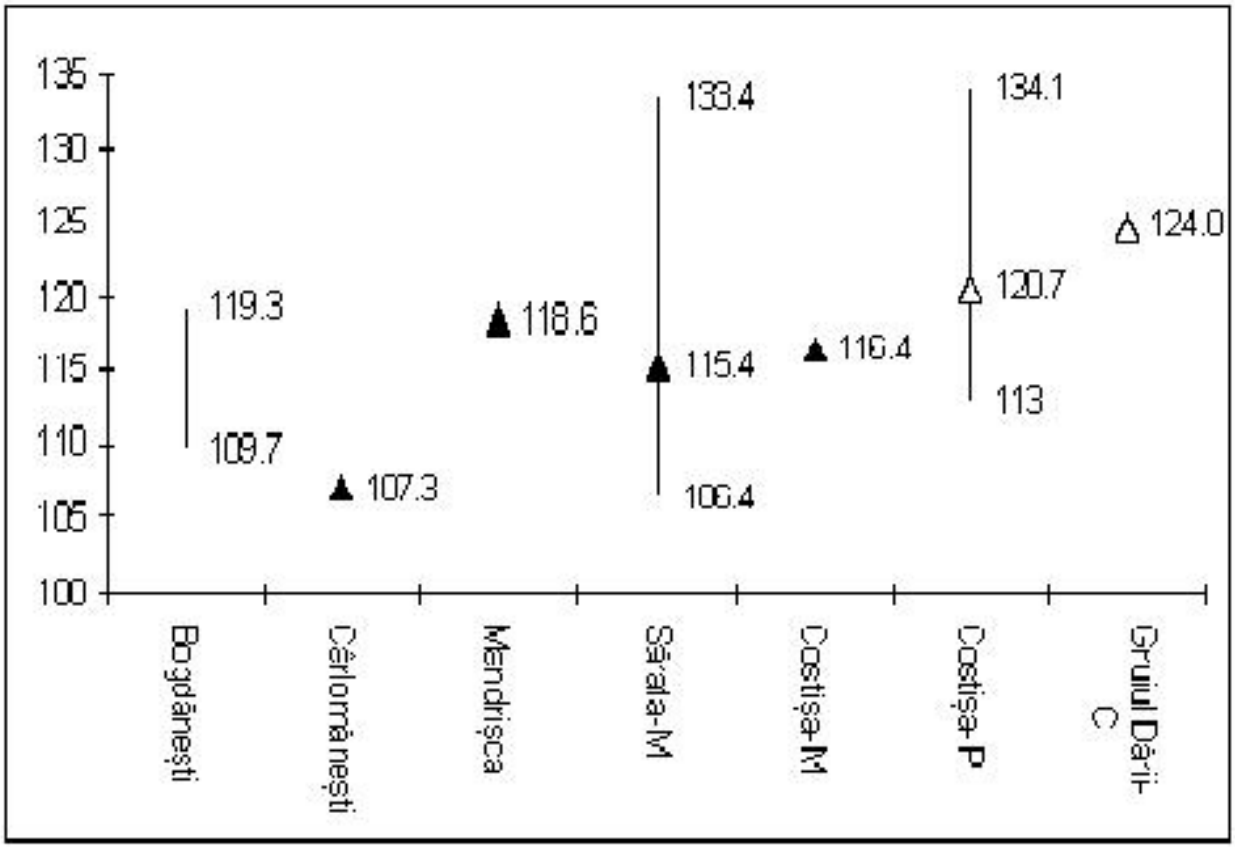

Fig. 3. Cattle size: ▲-Monteoru; ∆ -Eneolithic.

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resulting increased values, of 65-74 mm, with an average of 68.7 cm. In other Monteoru sites the values are much smaller, whereas estimates were made solely on the long bones: 61.85 cm in Costişa, 54.93 cm, 56.23 cm in Bogdăneşti, 60.9 cm in Mândrişca and 68.8 cm in Sărata Monteoru. Overall, the metric evaluations fall within the range size of the Bronze Age in south-eastern Romania.

Pig raised by Monteoru communities was relatively massive compared to previous epochs, some dimensions reaching the lower limits of wild boar. Even if some of its parameters are increased from previous epochs, it shows some primitive features: massive teeth, oblong lacrimal, obliquely nuchal region. For an astragalus from Costişa, it was estimated a waist of 76.1 cm, high value but consistent with those in other settlements: 69.1 cm in Bogdăneşti, 78.9 cm in Cârlomăneşti – *Arman*. As large values, but normal for the epoch were registered in Pietroasele: 70.3, 74.8 and 78.3 cm. Let us note a lacrimal bone index of 1.4, suggesting a piece not too elongated at Pietroasele. Massive teeth and large bones close to wild swine are missing.

Some fragmented dog skulls provide interesting data on racial types, common in the Bronze Age, in our regions. For example, a skull with a sharp and long snout, tiny but high orbits, placed sideways, relatively narrow forehead, cheekbones middle developed, with a total length of 180 mm, comes from Mândrişca. By these characters it approaches the current hounds. Dahr basal length varies between 156 to 179, so in the settlement there were dogs of varying sizes. It seems that the variation in waist is stronger than Neolithic epoch, according to the author. A large dog, like the wolf, with a Dahr length of 166.4 and a smaller one with a size of 45.1 cm were evidenced at Sărata Monteoru. So, dogs of different sizes with diverse features as security, hunting, guarded flocks have been highlighted in this site. Sub-medium and medium-sized animals are predominantly at Pietroasele and Costişa; one of them is about 49.39 cm. Overall, the few metric data of dog remains suggest more able-bodied animals than Eneolithic levels, in almost all cited settlements. However compared to Eneolithic, increases the proportion of medium and high specimens, though there are animals of small size as well. In case of horse data are even less. A sturdy horse with a height at the withers of medium size is suggested by the bones of Sărata Monteoru, unfortunately it is the only sample, more or less dimensional.

Regarding the age classes of the main domestic species, in some cases, general data are given without adequate detail. In the case of cattle from Mândrişca one stated that "*there are few sub-adult and young animals and old specimens are missing*"[8]. Similarly, if the Sărata Monteoru fauna, it seems that bovine specimens were cut between 3-10 years, there are slaughter of calves, there are few adults, there is very old animals, predominantly adults. The lack of bones of young animals, we believe is due to the selected sample (derived from the excavations from 1948 to 1952) as suggested in the article. As expected, large bones have been collected (suggesting a lot of adults). The other sample from Monteoru contains cattle bones come from a fetus, two calves and three adults, one of which is bull. A comparable situation displays Năeni – *Zănoaga* fauna, containing remainders from two young individuals, one subadult and four adults. Of these, one is about 5-7 years and another 7-9 years. Three juvenile (about 6-9 months), one sub-adult and five adult-mature (two individuals 4-6 years and one 8-10 years old) were supposed in Cârlomăneşti – *Arman*. So, a summary of previously stated shows that (fig. 4): similar picture emphasized Cârlomăneşti, Năeni and Sărata Monteoru, expressed by a majority of adult/mature animals (50%). Special is Bogdăneşti, with 89% adult/mature and Pietroasele with a predominance of sub-adults. Costişa is also placed apart with a moderate prevalence of adults, below 50%, with many sub-adults and few juveniles. Regardless of the share of either age class, beef was constantly used in food by Monteoru communities, not to mention, dairy.

Regarding small ruminants, the published samples have not provided detailed information on the

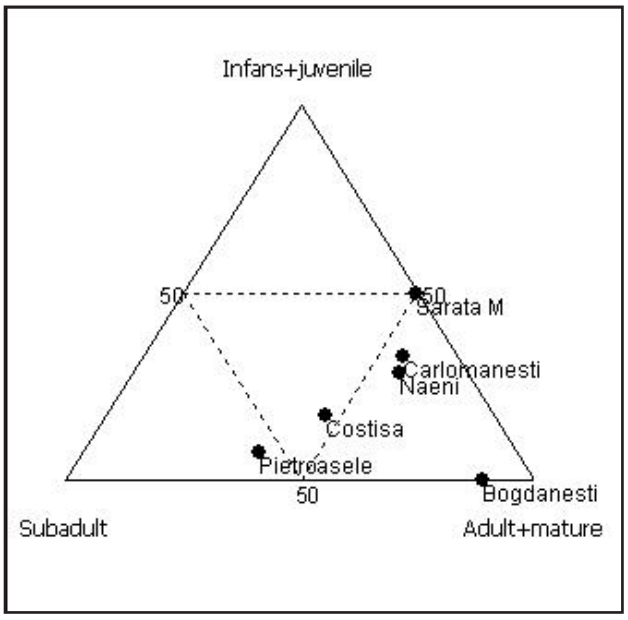

Fig. 4. Age-class patterns in cattle.

[8] Haimovici 1980, 197.

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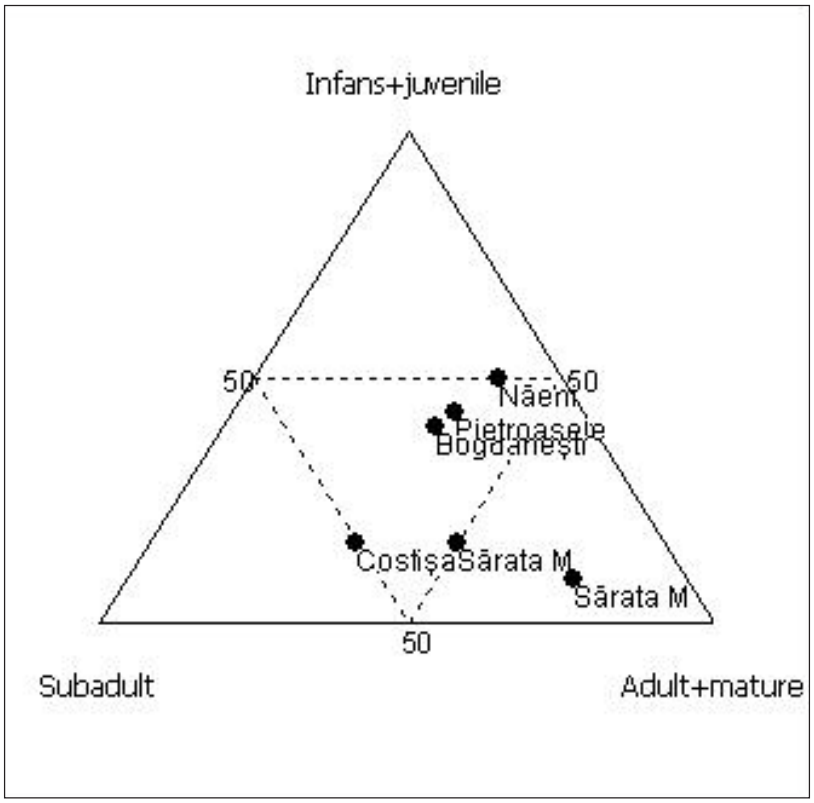

Fig. 5. Age-class patterns in ovicaprids.

age of slaughter too. On this basis we used only the ratio between young individuals, sub-adults and adults (mature). In the case of Mândrişca, it is specified that "*the young and sub-adult individuals are few... the small ruminants were mainly bred for by-products, milk and wool, whereas we found two individuals with very eroded dentition*"[9]. Ovicaprids' bones from Bogdăneşti come in small numbers from young individuals (four individuals under one year and as many about one year), five specimens were about 1.5-2 years and seven over this limit. And if Monteoru sample, there are few young specimens and sub-adults: only three animals (one between 6-9 months and two at 9-12 months), prevailing adults (matures) at a rate of 72.7% (about eight exemplars were 4-7 years old). Perhaps the bones' selection, mentioned before increased the percent of adults. The other Monteoru sample analysis emphasizes only three adult specimens (one for 6-8 years), three up to one year. At Năeni of ten individuals at least four are sheep (two of them female), one she-goat, and the other five indefinite. There are many young animals (even unborn) and sub-adults, accounting for about 60%, the rest are adults. Two goats, one of them over 4 months and another 4-6 years were assumed to Cârlomăneşti – *Arman*[10]. The latter had almost the whole skeleton, with fine cut-marks, assuming a deposit ritual context. Among other four ovicaprids, one was an adult, another was over 16-21 months, one was cut in 2-3 years and another was a juvenile / sub-adult. A graphical representation of the presented data, adding personal information for Pietroasele and Costişa (fig. 5) suggests that: Năeni, Pietroasele and Bogdăneşti show almost balanced shares of the three age-classes. Summing the percentages of young and sub-adults, it appears that more than 60% of animals were exploited for meat, and there is a significant rate (about 40%) of animals raised for dairy, wool, reproduction. A similar situation is found at Sărata Monteoru, so a pretty large share of adults, about 50%. However, the Monteoru samples determined by Professor Haimovici, with two thirds matures of the presumed specimens, is in constrast with the above described situation. And finally, the Costişa sample, with much smaller proportion of adults (about 33%) and an increased sub-adult rate, about 50%.

It seems that pig slaughtering is done prevalent up to two years, especially between 1-2 years, during it reached an optimum body weight (fig. 6). For example there are two individuals in Sărata Monteoru slaughtered at 18-22 months, two at 2-3 years and one at 6-7 years. The other sample from Sărata Monteoru reveals a specimen of 6-10 months, two between 18-24 months and two adults. Instead of it, most individuals are about two years at Mândrişca. The fauna from the Bogdăneşti provides only general information. The author states that most jawbones belong to animals "*for two years or have reached that age. There are younger individuals, but we found no remains of piglets or from older individuals*"[11]. According to fig. 6 the most represented age class is 1-2 years, it varies between 33% at Costişa, Pietroasele and 60% at Cârlomăneşti. Also, the grouping of adult/mature animals is also present in each sample, obviously with different shares; in almost each case there are a consistent percentage of animals kept for breeding. It ranges from 23-28% to Pietroasele, Năeni increasing to 40-44% at Cârlomăneşti, Costişa, reaching a maximum of 60% at Sărata Monteoru. On the contrary, the class of individuals killed up to one year is higher in Pietroasele, 44%, missing in Sărata Monteoru and Cârlomăneşti. So in terms of pig exploitation it is established that most nu-

[9] Haimovici 1980, 200.

[10] Dumitraşcu, Bălăşescu 2004, 52.

[11] Haimovici 1966, 128.

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merous were slaughters in sub-adult and adult stage. Slaughter of animals under one year was not too common in these communities. Based on the above it is concluded that Monteoru communities were breeders of cattle, especially in the settlements of the current Moldavia and small ruminants in the Curvature Carpathians region.

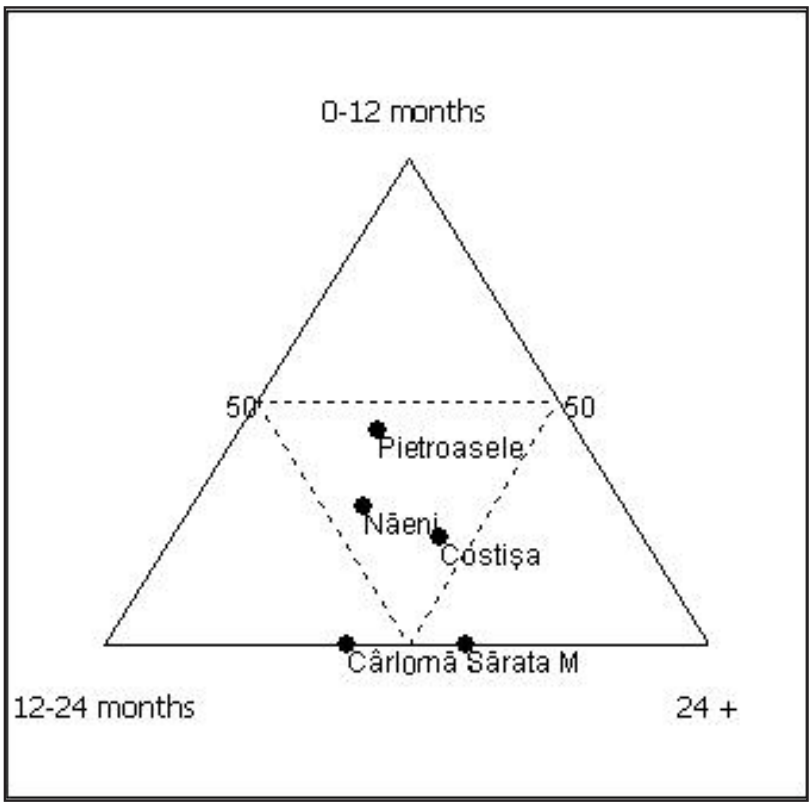

Fig. 6. Age-class patterns in pig.

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A GETIC GRAVE WITH GOLD EARRING FROM ZIMNICEA – "CÂMPUL MORŢILOR" NECROPOLIS

ANCA GANCIU,
DRAGOŞ MĂNDESCU

Keywords: Zimnicea – "*Câmpul Morţilor*", cremation grave in urn with lid, earring with zoomorphic extremity (lion head), pottery (mug) with nervure at the base of the handle, typology, analogies, chronology.

Abstract: This paper describes in detail the ***Grave 2*** discovered in the Getic necropolis from Zimnicea – "*Câmpul Morţilor*" during the 2007 archaeological campaign. This particular grave is a cremation one, with a small quantity of bones and the inventory deposed in an urn with lid. The funeral inventory consists in a golden earring with a lion head extremity, obviously an import from the Greek area. This is the first time when an object of this type is discovered north of the Danube. We discuss here some aspects about the association between the imported earring and the local pottery used as urn. We also examine the typological and chronological aspects that are dating the grave at the boundary between the 3rd and the 2nd c. BC.

Cuvinte cheie: Zimnicea – „*Câmpul Morţilor*", mormânt de incineraţie în urnă cu capac, cercel cu extremitate zoomorfă (cap de leu), cană cu „mustăţi" la baza toartei, tipologie, analogii, cronologie.

Rezumat: Articolul prezintă detaliat ***mormântul 2*** descoperit în necropola getică de la Zimnicea – „*Câmpul morţilor*", în campania de săpături arheologice din anul 2007. Este un mormânt de incineraţie în urnă cu capac în care a fost depusă o cantitate mică de oase umane calcinate şi inventarul funerar. Singura piesă de inventar este în mod evident de import din spaţiul grecesc: un cercel de aur cu o extremitate în formă de cap de leu. Este prima apariţie a acestui tip de podoabă la nord de Dunăre. Sunt discutate aspecte legate de asocierea dintre podoaba de import şi ceramica locală reprezentată de cana utilizată drept urnă, precum şi aspecte de tipologie şi cronologie, pe baza cărora mormântul ar putea fi datat la limita dintre secolele III-II a. Chr.

The research of the Getic necropolis from Zimnicea originates in the three so-called "archaeological explorations" (1871-1873) carried by Cezar Bolliac on a large area extended east of the point known as "*Cetate*"[1], who also named the site "*Câmpul de morţi dacic*"[2]. In the last quarter of the 19th century, two antiquary amateur archaeologists, Dimitrie Papazoglu and Dimitrie Butculescu, excavated the site area in search of antiquities. The first systematic excavations, using modern scientific methods, were organised after the Second World War by Ion Nestor (1948-1949)[3] followed by Alexandrina D. Alexandrescu (1967-1974)[4].

In the second half of the 19th century, there were excavated around 165 graves; other 166 graves were excavated by Nestor – Alexandrescu, making the Zimnicea necropolis one of the most important known Getic cemeteries, relevant for the understanding of the material culture and the funerary practices, as well as the Iron Age chronology at the Lower Danube[5].

In 2007, the archaeological research was resumed and continued until 2009, by a team lead by Mircea Babeş[6]. These last campaigns had an emergency nature caused by the rapid extension of the human habitat in the western limits of Zimnicea city, affecting a large area of the site[7].

[1] Bolliac 1872, 2-4; Bolliac 1873, 1-2; Bolliac 1874, 1-2, 4; Măndescu 2009, 205-213.

[2] Bolliac 1872, 2.

[3] Nestor 1949, 116-125; Nestor 1950, 93-102.

[4] Alexandrescu 1980, 19-126.

[5] Măndescu 2010, 165-182, figs. 22-30.

[6] Babeş *et alii* 2008, 331-332; Babeş *et alii* 2009, 232-233; Babeş *et alii* 2010, 208.

[7] There were build houses, additional buildings, enclosures, new streets and electric networks. The new archaeological researches were requested by the Zimnicea City Hall in the regime of rescue excavations. The four archaeological campaigns were financed mainly by Zimnicea City Hall (September 2007, May 2008, August 2008 and July-August 2009). The last campaign was also financed by Teleorman County Museum and Ministry of Culture.

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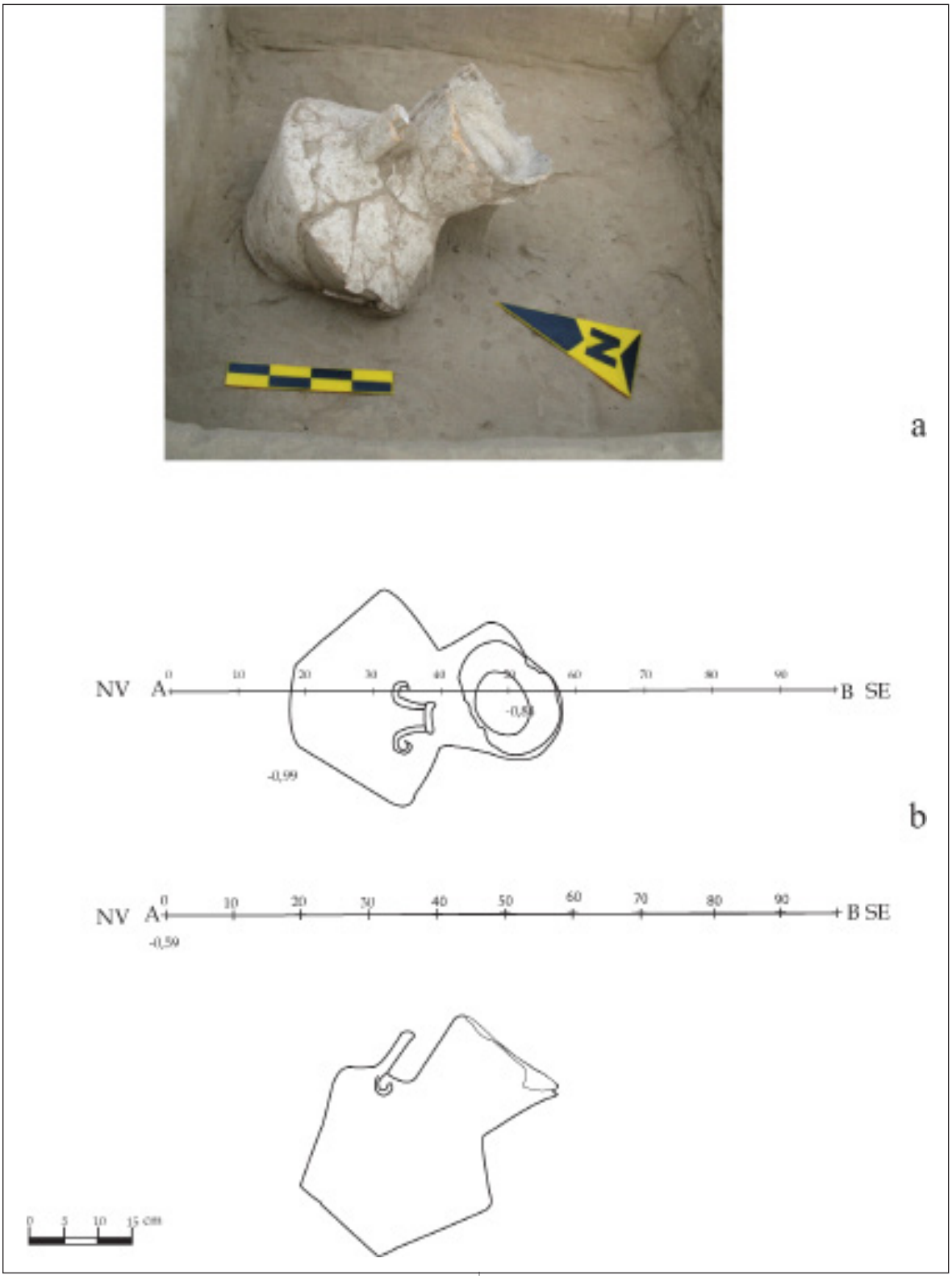

Fig. 1. Zimnicea –"*Câmpul Morţilor*" 2007, trench 2, square 5. Grave 2. Photo (a) and drawing (b).

In the four campaigns were excavated about 0.2 ha and there were discovered 51 plane graves: 41 cremation graves with the bones deposed in urns with or without lid, four graves with cremated bones in pits, three inhumations graves and three cenotaphs.

In the perspective of a future exhaustive monographic publication of our discoveries, we present here only one grave from those 51. The reason for this choice is the fact that this grave is unique through its funeral inventory and the association of the elements.

Grave 2 was discovered in the first campaign of excavations (2007), in trench 2, square 5 and is located in the central-north area of the known

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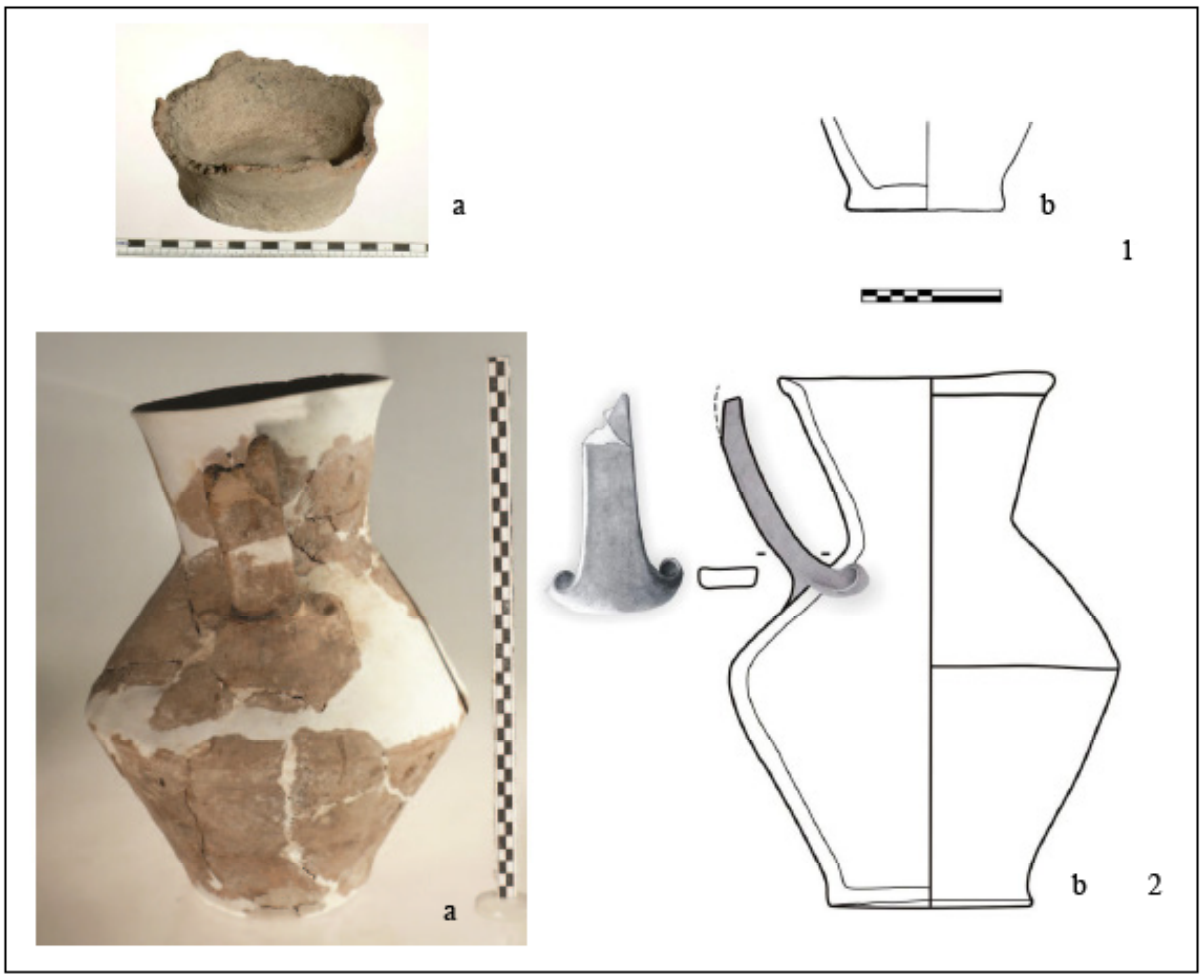

Fig. 2. Zimnicea – "*Câmpul Morţilor*", ***Grave 2***/2007. 1 – lid, 2 – urn. Photo (a) and drawing (b).

surface of the necropolis[8]. This area is located west of sector C7 (excavated by Ion Nestor in 1949) and is part of an important grave agglomeration. It is a cremation grave with the bones deposed in urn with lid (fig. 1/a, b). The lid was found at the depth of -0.7 m; the base of the urn was at -1.05 m depth. The grave pit could not be delimited, a common case for most of the graves from this cemetery. The urn was found slightly inclined with the upper part towards south-east; the lid was placed upside down above the urn.

As urn it was used a high hand made pot with a truncated neck (fig. 2/a, b), with straight cut rim. The band handle has nervure at the base (two embossed volutes). The pot is brown with a whitish surface. The upper part of the vessel is broken and the handle is fragmentary. Dimensions: 38 cm height; 28.5 cm maximum diameter; 18.5 cm rim diameter; 14.5 cm bottom diameter. The lid is represented by a bottom of a vessel, hand made, probably from a mug (fig. 2/1). The cremated bones, in small quantity (101.75 g)[9], were deposed at the lower part of the urn. The white colour of the cremate bones suggests that the body was burned at a temperature exceeding 600^0.

The funeral inventory consists in only one item, found among the bones (fig. 3). The earring is very well preserved without burning traces. The object is ring shaped with opened extremities[10]. Its maximum diameter is 2.25 cm and it weights 3.78 g. One extremity is fashioned as a lion head and the other one twisted and thinned out gradually. The zoomorphic extremity was separately made from gold foil, *au repoussé* style and after attached to the body of the earring. The lion head is realistic, with a prominent snout and opened mouth. The eyes are suggested by two prominences separated by a double filigree nervure, descending on the forehead, with curved extremities. The animal's crest is represented by various filigree geometrical motives (circularly, volutes and jag), combined with small welded granules. The earring body has a triangular section and is made from folded golden foil. On its body there are welded three longitudinal filigree nervure that are joining and interpenetrate

[8] Alexandrescu 1980, 50, fig. 1.

[9] The anthropological analysis was carried by Laetitia Laquay for her master degree, and includes the entire human ostheological assemblage from Zimnicea necropolis (2007-2009).

[10] Teleorman County Museum, Alexandria, inv. no. 27041.

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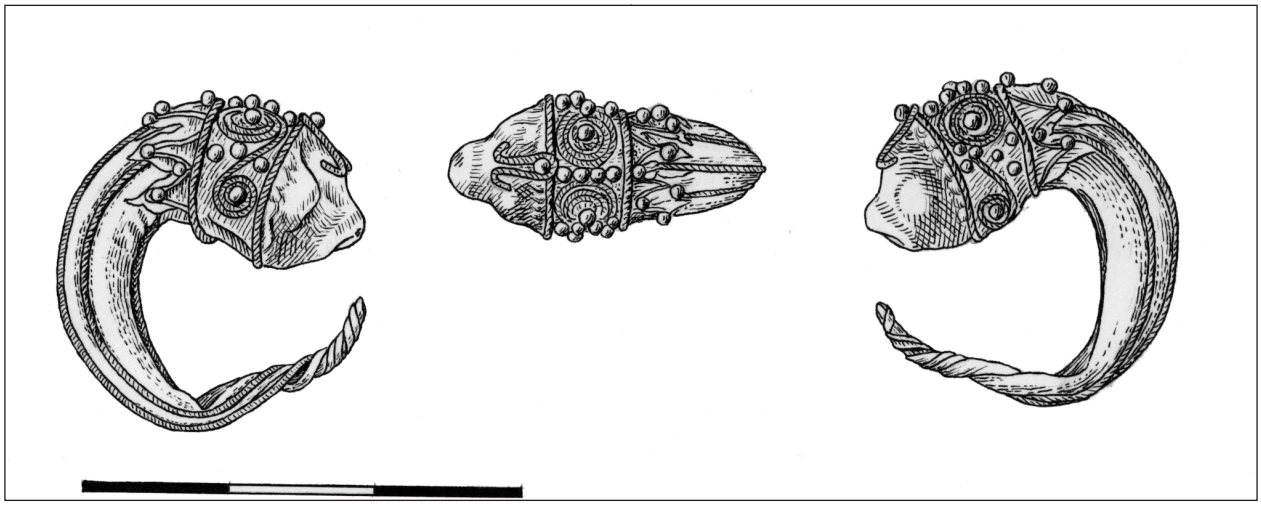
a



b

Fig. 3. Zimnicea –"*Câmpul Morţilor*" 2007, ***Grave 2***/2007. The golden earring. Photo (a) and drawing (b).

at the level of twisted thinned extremity. The object is obviously imported from the Hellenistic cultural area.

Considering the funeral rite and ritual, this grave follows the trend of the funeral practice observed at the Zimnicea necropolis and also in the general funeral behaviour of the Getic communities from the 4th-3rd c. BC. The cremation graves with the bones deposed in urn, with or without lid, are dominant in Zimnicea, representing 83.4% of all the graves that were discovered (181 cremation graves in urn with or without lid, out of all the 217 graves excavated between 1948 and 2009).

The body cremation took place on a pyre with unknown location[11]. We have to mention here that neither the urn nor the lid displays traces of an eventual secondary burning that may have happened at the pyre. The small bone quantity does not represent a particular case, by comparing it with the rest of the graves excavated in our four campaigns. According to the anthropological analyses, the bone quantity deposed in urns may vary between 23.19 g (M. 10) and 1,700.23 g (M. 12).

Due the ornament from the base of the handle, the pot used as urn is part of well documented pottery group, the so called pots with "moustache". All known examples are hand made, with the handle in band or with rectangular section. Most of them were found at Zimnicea necropolis. Four mugs of this type were already known from older excavations made by Alexandrina Alexandrescu (fig. 4/1-4). They were discovered in graves that were dated around the 2nd c. BC[12] (C10 M61, C10 M118, C14 M1 and C15 M56). In the last campaign from Zimnicea, it was discovered a sixth pot, smaller, mug sized (M. 47) (fig. 4/5)[13].

[11] In the entire excavated area of the site there was never found a place that could be considered as a pyre (Alexandrescu 1980, 42). Anyway, Bolliac mentions a discovery "in the extremity of Câmpul morţilor" consisting in "a round area where the soil is red and hardened by fire - a place for a pyre", found at more than one meter depth (Bolliac 1872, 4; also see Măndescu 2001, 19).

[12] Alexandrescu 1972, 17, pl. II/1, 5; Alexandrescu 1980, 27, 31-32, 34, fig. 26/1-4.

[13] Unpublished excavations Anca Ganciu, 2009.

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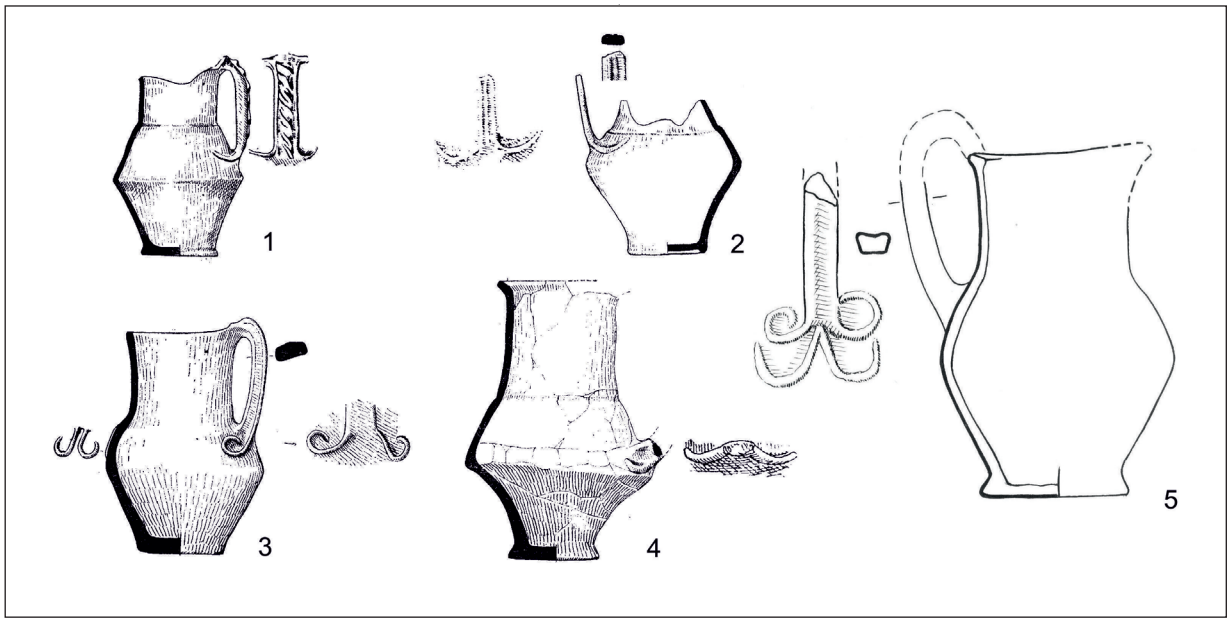

Fig. 4. Zimnicea –"*Câmpul Morţilor*" 2007, pots and one mug with "moustache" discovered in graves. 1 – C10 M118, 2 – C15 M56, 3 – C10 M61, 4 – C14 M1, 5 – ***Grave 47***/2009 (unpublished); different scales. 1-4, *apud* Alexandrescu 1980.

These pots were dated in the 2nd c. BC based on the association with discoveries considered typical for this century: hand made cups (in C14 M1 and C15 M56) and fibula of middle La Tène / LT C2 type (in C15 M56)[14]. Recent analysis of the necropolis confirms the dating of the graves with this kind of pots to the latest funeral horizon from "*Câmpul Morţilor*"[15].

Other discoveries from the Geto-Dacian world are placing the evolution of the "moustache" pots into a chronological frame that widely covers the 3rd-2nd c. BC. Probably, the oldest mug from this category is the one found in Grave 260/2 (fig. 5) in Stelnica – "*Grădiştea Mare*" necropolis (4th-first half of the 3rd c. BC)[16]. Another mug was found in the fortified settlement from Satu Nou **–** "*Valea lui Voicu*" (fig. 6), in a pit from the eight level, dated at the middle 3rd c. BC[17]. For the first half of the 2nd c. BC we can mention here a mug discovered in the *dava* from Grădiştea (pit no. 184)[18]. The latest example from this type was found on the Mureş valley in a grave from Teleac, dated in La Tène C2 / La Tène D1[19]. Other pots with this ornament, with uncertain dating, were found in the Apahida necropolis and Getic *dava* from Coconi and Crăsani[20]. Even so, we may try to relate them with the general chronology of these site (La Tène C1, the 2nd half of the 3rd c. BC – beginning of the 2nd c. BC, for Apahida, respectively 3rd-1st c. BC for Coconi and Crăsani).

On the other part, the gold earring imposes a more detailed discussion. The reason for discussion resides in his unique present in Zimnicea necropolis. Despite a numerous funeral inventory imported from Hellenistic area, the number of golden inventory discovered at Zimnicea is relatively low. Were found here eight pendants by different types, discovered in four cremation graves (C6, C7 M1, C7 M4 and C17 M32)[21]. Due this situation, the importance of our discovery consist first in the possibility of framing the earring in a series of golden objects found at Zimnicea; and secondary needs to be mentioned here, is the fact that it is the only discovery so far at North Danube.

The typology of golden earrings with a zoomorphic extremity (lion head shape) was discussed a quarter century ago by Milena Dimitrova, in a study based on 24 objects (pairs or single finds) discovered in Bulgaria[22]. Regarding the golden earrings, the spreading area is much larger, from southern Italy – *Magna Graecia* (Tarent, Siracuse) to Minor Asia (Pergamon) and the Eastern Mediterranean basin (Crete, Melos, Cyprus, Antiochia); from northern Greece, Macedonia (Kožani, Thessaloniki, Amphipolis) to the western (Callatis, Tomis) and

[14] Alexandrescu 1972, 17; Babeş 1988, 8, n. 15-17.

[15] Măndescu 2010, 171, fig. 24.

[16] Unpublished. Excavations Conovici, Ganciu, Matei. Cf. Conovici, Ganciu, Matei 2002, 299.

[17] Unpublished. Excavations Conovici, Irimia, Ganciu. About the chronology and content of level eight see Conovici *et alii* 2011, with literature.

[18] Sîrbu 1996, 70, 76, fig. 64/4.

[19] Moga 1982, 87, fig. 2/1a, b; Rustoiu 2008, 142, fig. 71/1.

[20] Crişan 1966, 50, figs. 20/2; 21/2; Vulpe 1924, 47.

[21] Alexandrescu 1980, 51, figs. 50, 1, 5-6, 14-15.

[22] Dimitrova 1989, 1-14.

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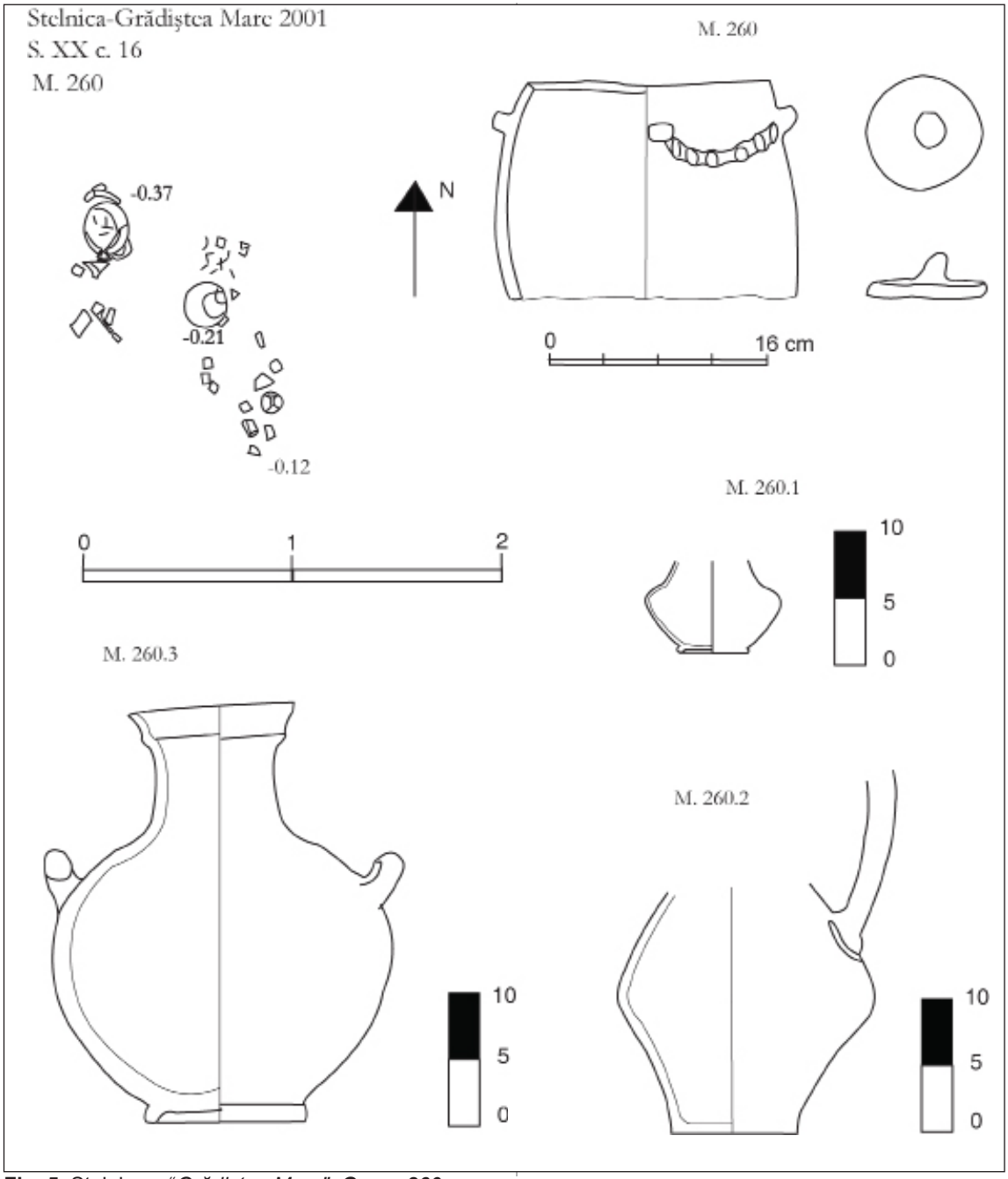

Fig. 5. Stelnica – "*Grădiştea Mare*", ***Grave 260***.

northern (Olbia, Chersones, Nymphaion, Pantikapaeum) shores of the Black Sea[23]. According to her conclusions, these adornments from the Thracian area, based on dimensions, technique and ornaments can be divided into two different types, with specific chronological features. The first type appears at the end of 4th c. BC-first half of the 3rd c. BC and persists even latter. The second type is specific to the 2nd c. BC, persisting also in the next century.

The most expressive parallels for the Zimnicea earring can be found in the first type described by Dimitrova.

As concerns the execution of the lion's head, the closest analogy is the earring from Kavarna[24]. The head's ornament is closely related to the details displayed by an earring found at Sveštari – "*Ginina Mogila*"[25]. The discovery of this type in the Sveštari necropolis, (in "*Ginina*" and 17 tumulus), in con-

[23] Dimitrova 1989, 7-8, fig. 18. For the samples discovered in Hellenistic cemeteries of the Greek colonies from the western shore of the Black Sea, see: Bucovală 1967, 44-45, fig. 32 (Tomis, end of the 3rd-beginning of the 2nd c. BC), Preda 1966, 139-142, fig. 3/1-2 (Callatis, half of the 3rd c. BC), Bârlădeanu-Zavatin 1980, 223, pl. 4/2 (Callatis, end of the 3rd-beginning of the 2nd c. BC) and Tonkova 2007, 279-282, pl. 1/3 (Odessos, end of the 4th-beginning of the 3rd c. BC; an workshop for the production of these adornments is supposed to have functioned here).

[24] Dimitrova 1989, 3, fig. 1/5; 3 (photo); Tonkova 2007, 280, pl. 3/1 (drawing).

[25] Dimitrova 1989, 6, fig. 3, Kavarna), 9, Sveštari.

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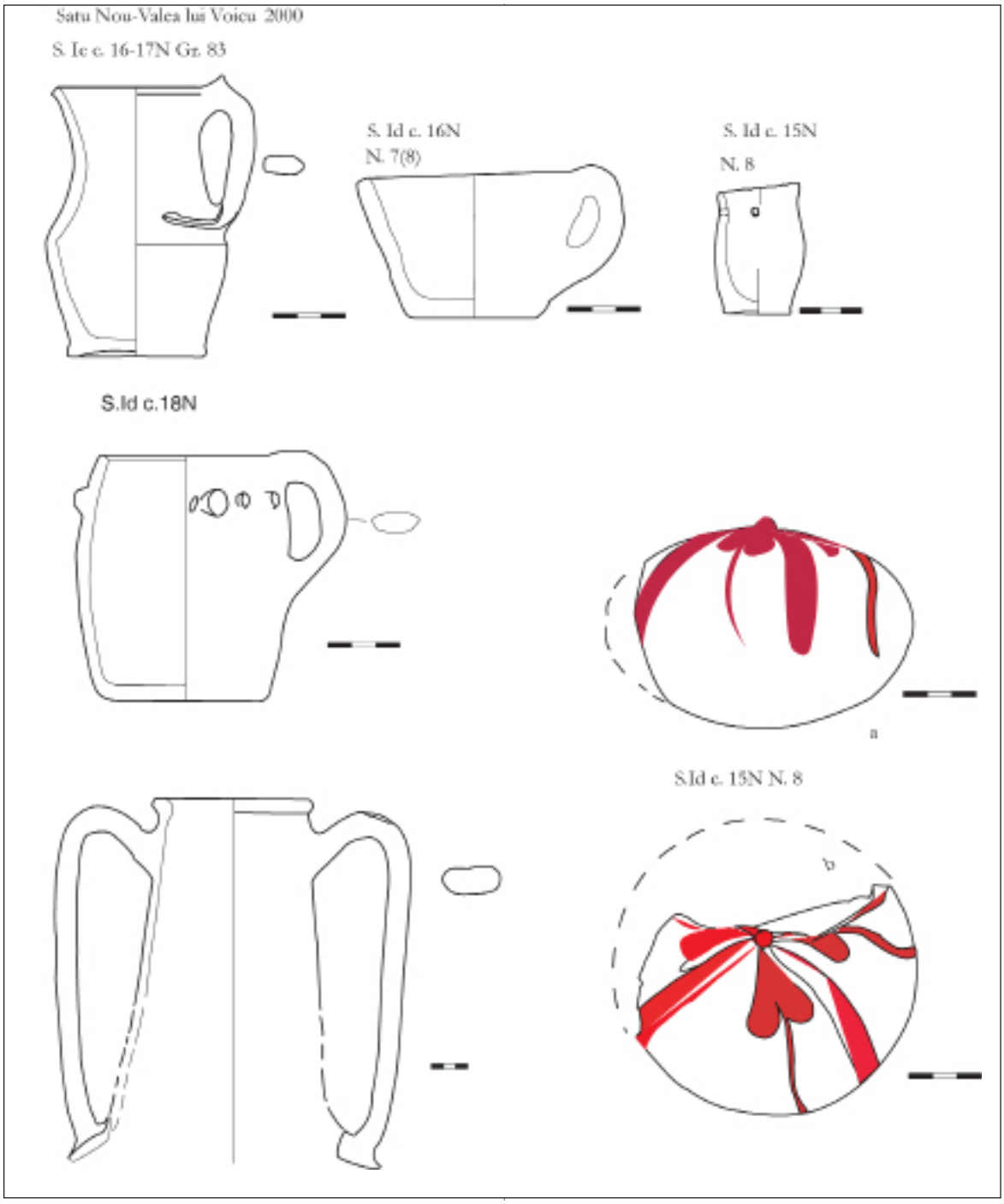

Fig. 6. Satu Nou – "*Valea lui Voicu*". Pottery from level 8.

texts well dated in the first half and the middle of the 3rd c. BC[26], is a strong argument for the chronology of the earrings from the first type.

On the other hand, the discovery of a golden chain with lion head extremities in a Hellenistic grave from Mesembria necropolis, pleads for a latter dating, at the end of 3rd c. BC of this zoomorphic ornament. The chronology of the Mesembria grave is based on a very rich funeral inventory (adornments and pottery)[27].

The body of Zimnicea earring is mostly untwisted, this being a distinctive morphological feature that separates it from all the other early earrings. A close analogy can be seen in a grave from Krăn, dated in the 2nd c. BC[28].

[26] Dimitrova 1989, 12, n. 15, fig. 1; Gergova 1996, 16, pl. 4/6; Teleagă 2008, 26-47, Taf. 95; 98/1; 188/1-7; 190/4 (the author does not consider the earring from the "*Ginina*" tumulus to be an import and ignore it); Măndescu 2010, 185-186, 190, 413-414, fig. 33, pl. 292-294, 295/A, 296/A.

[27] Čimbuleva 1964, 57 ff.; Tonkova 2007, 285. The same type of chains, but with different zoomorphic extremities (antelope heads), were found in graves from Callatis associated with lion head earrings (Preda 1966, 139-140, fig. 3).

[28] Dimitrova 1989, 6-7, fig. 12.

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The execution technique of the ornamental motives of the Zimnicea earring also suggests a latter dating than the majority of the objects belonging to the first type. The pseudo filigree and pseudo granulation are techniques widely use in the Hellenistic goldsmith of the west pontic colonies at the end of the 3rd c. BC, nonetheless in the second half of the century[29].

Considered to be one of the most significant proofs of the Balkan influences, the pseudo filigree and the pseudo granulation techniques are spreading also in the eastern Celtic art during the middle La Tène[30].

Even though the chronological relevance of the association of the two elements found in Grave 2, was already discussed by one of the authors of this paper[31], we believe that a short resumption of this issue is welcomed. First of all we have to highlight the rarity of the case in the Zimnicea necropolis and generally in the Getic cemeteries, when both funerals inventory and the local pottery are key elements for the grave chronology. The chronological frame of the mentioned objects (local pottery and the golden earring, associated in Grave 2) is not significantly wide and they certainly overlap during the last half of the 3rd c. BC[32].

The possible dating of Grave 2 about 200 BC may constitute a chronological reference point for the last horizon of the Zimnicea necropolis. A possible slight anteriority of the earring, belonging to a type mainly dated in the first half of the 3rd c. BC does not change our dating of the grave. The hoarding of the golden earring for a longer time can be a probable explanation for the Zimnicea case, which is not unique in the Thracian world. The heritage from generation to generation of a golden adornment (an Italic type fibula) was already documented in a tumulus grave from Koprivec[33].

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[29] Tonkova 2007, 284.

[30] Szabó 1974, 147, ff.; Szabó 1992, 162-164; Kruta 1975, 68-71.

[31] Măndescu 2010, 180, 182, pl. 374/2.

[32] According to the opinion of Măndescu 2010, 180, ***Grave 2*** can be dated probably even later, in the beginning of the 2nd c. BC.

[33] Stančev 2004, 158, fig. 6.

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MOTHERHOOD SCENES ON ANCIENT GREEK FUNERARY *STELAE*[*]

EMAN A. ABDEL-AZIZ

Keywords: ancient Greek art, funerary *stelae*, motherhood scenes, ancient Greek women.

Abstract: Ancient Greek ideals about women were represented on stone no less than they were put down in writing, and Greek funerary *stelae* with motherhood scenes provide us with vivid glimpses of these ideals. Although these *stelae* were originally set up to commemorate dead women and carry messages which were particularly valued by them, their ideals were also shared with and understood by other (still alive) members of their communities. This paper studies ancient Greek *stelae* representing women during the classical and Hellenistic periods. It argues that most Greek women wanted primarily to be remembered as having been mothers. As such, they were mostly represented either as having died while giving birth to one, bidding farewell to their children or in familial scenes.

Cuvinte cheie: artă antică greacă, stele funerare, scene materne, femeie antică greacă.

Rezumat: Idealul grecilor antici despre femei a fost reprezentat în piatră dar şi în inscripţii sau pe stele funerare, cu scene materne care ne oferă câteva frânturi despre acesta. Cu toate că aceste stele erau iniţial puse pentru a comemora femei decedate şi pentru a transmite mesaje pe care acestea le preţuiau în mod deosebit, aceste idealuri erau împărtăşite şi înţelese şi de către alţi membri (încă în viaţă) ai comunităţilor. Această lucrare studiază stelele antice greceşti reprezentând femei din perioada clasică şi elenistică. Ea susţine, în principal, că cele mai multe femei din Grecia doreau să fie comemorate ca mame. Ca atare, ele au fost reprezentate mai ales mai ales ca decedate la naştere, luându-şi rămas bun de la copiii lor sau în scene familiale.

At the beginning of her important study of Death, Birth, and Motherhood in Classical Greece, Nancy Demand has raised some questions about ancient Greek funerary reliefs which commemorate women. While one of these questions relates to the actual risk women faced during labor in ancient Greece, another asks: "*Why did families choose to portray scenes of labor on funerary memorials…?*"[1]. This question, in addition to some others, provides the starting point of this paper; scenes of labor or childbirth constitute only a part of the topic I am discussing here. Funerary *stelae* also show women with their infants presented to them, or surrounded by children when these were old enough to walk. I shall attempt here to demonstrate that motherhood scenes constitute by far the most dominant scenes on women's funerary reliefs and that the frequency and variety of these scenes reflect, above all, a public recognition of women's primary role in the Greek world of the Classical and Hellenistic periods. Moreover, the high frequency of these scenes, both in and outside mainland Greece during these periods, as we shall see, attests to the universality and importance of the ideal of motherhood in the ancient Greek world.

To demonstrate this point, I shall divide the scenes in which women appear into three groups: the first includes women who died during childbirth. The second group shows women accompanied by one or more children while the third includes familial scenes showing, in addition to the woman and her children some other members of her family. Although these groups include women in different stages of their lives, and probably also in different statuses as widowed mothers or mothers survived by their husbands, they all concentrate on a common idea: the deceased woman was either a mother or died on her way to become one. Needless to stress, however, that the divisions between the three groups of *stelae* are not clear cut, particularly since labor scenes often include some close relatives of the deceased. Considering the limited space available for this paper, I shall limit my discussion to some illustrative examples from each group.

Labor Scenes

A considerable group of funerary monuments show women in labor, apparently to emphasize the circumstances leading to the loss of their lives.

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[1] Demand 1994, IX; where she notes that "*Greek commemorative tradition otherwise avoided references to suffering and illness*".

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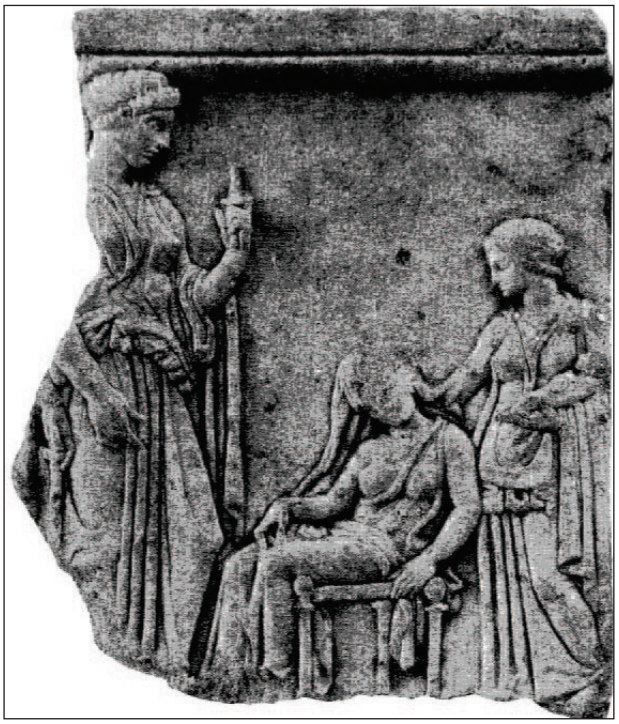

Fig. 1. Metropolitan Museum of Art 24.97.92.

The style of these monuments has been described as attic or imitating the attic, particularly in the classical and early Hellenistic periods. Their interpretation has also been a subject of debate centred on on whether or not these scenes indicate that the Greeks gave equal honours to women who died during childbirth as they did with men who lost their lives in battle. Demand, who discussed some of these scenes, has concluded that Greek funerary *stelae* "*register an important distinction between men and women who died for the polis, rather than establishing an equivalence between the two*"[2]. Her view contradicts earlier opinions advanced by some French and German scholars. Nicole Loraux has formerly argued for this equation on basis of the literary evidence in a famous article, significantly entitled: "*Le Lit, La guerre*"[3]. The same view was also expressed by Ursula Vedder whose article title is more expressive of the idea of equivalence and who has concentrated on attic *stelae* of the 4th c. BC[4]. Most recently, the issue has been reconsidered by Maria Luisa Catoni in an article discussing rules of life and death motherhood scenes on *stelae*[5] and by Susan Wise in her Ph. D. thesis presented to the at University of Cincinnati two years later[6]. I shall come to this point later; suffice it here to note that these previous discussions have mostly depended on a certain group of classical attic funerary gravestones and that they do not consider closely other motherhood scenes, particularly the second and third groups of *stelae* discussed in this paper.

Scenes of women in labor appear both on *stelae* and on a type of pottery named *lekythos*. The association between this particular type of vases and funeral scenes is a well known phenomenon, as may also appear from some scenes on white ground vases during the 5th and 4th c. BC[7]. However, whether on a stone slab or on a *lekythos*, the deceased woman appears in these scenes in a general state of exhaustion, collapsing and receiving help from a female attendant, with her clothes loosened and her hair usually untied[8]. Sometimes, there is one or more than one female attending to her and, in some cases, a male figure who may presumably be her father or her husband.

Labor scenes include two groups, one which show the infant and another which do not.

I begin with an early votive funerary scene which comes from Athens and dates to the 5th c. BC (fig. 1)[9]. The woman appears in the usual "*sinking posture*", with loosened hair and clothes, and a downcast face. She is surrounded by two female figures; one of them stands behind her touching her head and holding a "*swaddled infant*" with her left hand; the other figure obviously represents a deity.[10]

The famous *lekythos* of Theophante provides us with an example of the scenes which are characterized with the presence of a man (fig. 2)[11]. It comes from Athens, dates ca 340-330 BC and shows Theophante sitting on a chair with loosened hair and clothes, and with her right hand falling. Her collapsing body and motionless limps are all usual indications of labor. Behind her stands a woman, whose head is close to Theophante's as if kissing her farewell. On the right stands a man supporting her left hand. His grief is apparent from the movement of his right hand up to his head. Since no swaddled infant appears on this scene, it may be the case that Theophante died before giving

[2] Demand 1994, 121 with note 1; quote at 129 [emphasis original]; Garland 2001, XIV.

[3] Loraux 1981, 37-57.

[4] Vedder 1988, 181-191, pls. 21-25. All dates are BC.

[5] Catoni 2005/1, 27-53.

[6] Wise 2007, especially 239-245.

[7] Younger 2002, 171.

[8] Wise 2007, 240; Demand 1994, 122 with note 4. Cf. Vedder 1988, 162, 164.

[9] Metropolitan Museum of Art, 24.97.92.

[10] Demand 1994, 123. Cf., however, Wise 2007, 240, n. 485, on the recent discussion on the authenticity of this relief.

[11] Athens, National Archaeological Museum, 1055. Another famous example may be found on the Sackler Museum *stele* in which an originaly female figure was reworked to represent a man; on which see now Stewart, Gray 2000, 248-74.

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birth[12]. Another famous scene is that of Plangon and Tolmides (fig. 3) [13]. Plangon appears sitting on a chair falling backward as if fainting. She is being helped by two females from both sides who give her physical help and support. Tolmides stands on the far left holding his head with the palm of his left hand in a gesture indicating sadness and grief. His feelings are further confirmed by his attitude and downcast face. The inscription on the architrave identifies the deceased and her husband and shows that they were from Plataea. The *stele* dates to around 320 BC[14].

The iconographical representation of women dying during childbirth was not limited to Athens which provided us most of the preceding examples. Other *stelae* with the same theme, dating back to the classical period, were found elsewhere in Greece in addition to many others which prove that scenes of women dying during childbirth traveled with the Greeks to other areas into the Hellenistic world. They all share the same main elements, for the most part, and can be dated in light of each other. For our purposes, however, they attest the popularity of the scene and reflect an appreciation of the particular circumstances which caused the deceased to lose her life. Particularly noteworthy here is that this appreciation was widespread in classical Greece and in the Hellenistic world. Vedder has counted ten *stelae* dating to the Classical period and five dating to the Hellenistic. She has compared their style and has stressed that they are all "*almost similar in the number of figures and in their scenes composition*"[15]. Reference has already been made to the *stelae* of Plangon and Tolmides which was found at Oropus between Athens and Boeotia. I give further some more Hellenistic examples to demonstrate the point[16].

From the city of Volos, to the north of Attica, we have a painted *stele* which represents a deceased named Hediste. The relief is accompanied by an elaborate epitaph indicating that the woman died together with her child, which appears swaddled in the hand of a female figure in the scene[17].

Fig. 2. Athens, National Archaeological Museum 1055.

Fig. 3. Athens, National Archaeological Museum 749.

The island of Thasos which lies further north in the Aegean provided us with some fragments of a relief bearing the same artistic motifs already encountered on Athenian ones, but dates to the late 4th or early 3rd c. BC[18]. In Alexandria, in Egypt, two

[12] See also the *lekythos* of Pheidestrate and Mnesagora, Athens, National Archaeological Museum, NM 1077 (which has two female figures); for other scenes on *lekythoi,* see Catoni 2005, 34, 37, 42.

[13] Athens, National Archaeological Museum, 749.

[14] Demand 1994, 124.

[15] Vedder 1988, 174.

[16] See the list compiled by Wise 2007, 239, n. 482.

[17] The epitaph reads: "*The Fates spun on their spindles then for Hediste their painful thread when the bride went to meet the pains of labor. Miserable one! She will not embrace her infant, or wet the lips of her baby with her breast, for one light [of day] look, and then Fortune coming to both alike carried the two away to one tomb*" quoted in Demand 1994, 126 with note 31.

[18] Vedder 1988, 172-173.

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Fig. 4. The Graeco-Roman Museum, Alexandria.

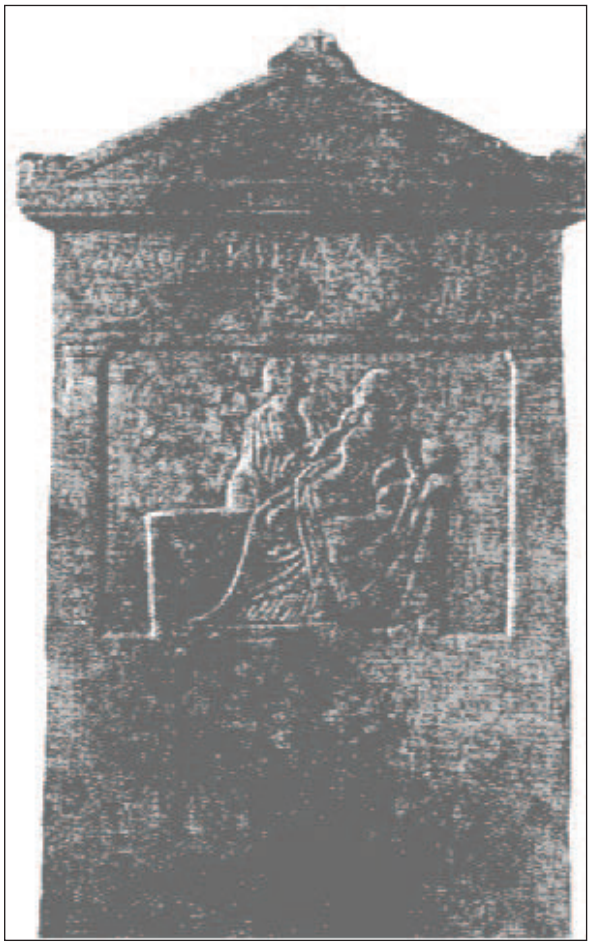

Fig. 5. Piraeus Museum 21.

stone *stelae* and a painted one were found. On the better preserved stele of the two stone reliefs (fig. 4), we see a pregnant woman being supported by two female figures, her upper part is naked and the garment falls on her lower part allowing us to note the artist's concentration on the signs of pregnancy[19]. The same scene is found also on the painted slab[20]. Another similar *stele* found in Rhodes dates to the 3rd c. BC and shows the same artistic motifs[21].

Despite the clear message of these *stelae* in their representation of women dying during childbirth, their interpretation has been a subject of discussion on the basis of an epigram which dates to the 4th c. BC and identifies the deceased as the mother of the pregnant woman[22]:

Unhappy Mnasylla, why does it stand on your tomb, this picture of your daughter Neotima whom you lament, her whose life was taken from her by the pangs of labour? She lies in her dear mother's arms, as if a heavy cloud had gathered on her eyelids and, alas, not far away her father Aristoteles rests his head in his right hand. O most miserable pair, not even in death have you forgotten your grief.

Demand, who quotes this text, is certainly right in concluding that we need to be more flexible and to exercise some caution in our interpretations of these scenes[23]. But how much caution do we really need to exercise in these cases? It is important to note that this particular epigram provides us with an unusually detailed description[24]. Greek funerary *stelae* of the classical period are not usually accompanied with such detailed inscriptions that may help in their interpretation. This general remark applies as well to women's funerary *stelae* studied here. It would seem rather that Mnasylla's epigram was purposely written to caution the viewer against reading this particular *stela* according to the general terms of other similar scenes (a point which applies to Ampharete's *stele* below). Therefore, we may indeed be justified in stressing that the majority of *stelae* have been those of the pregnant woman herself. Another more general argument which is usually introduced against a direct interpretation of funerary scenes is that they were sometimes reused and adapted to the needs of

[19] Demand 1994, 124; Vedder 1988, 173 with note 53.

[20] Which is now in the Metropolitan Museum of Art, cat. 04.17.1.

[21] Catoni 2005, 43, fig. 14.

[22] *Anth. Pal.* 7.730, trans. Paton, slightly modified (Loeb).

[23] Demand 1994, 131.

[24] Stears 2000, 213. Wise 2007, 242: "*This description goes far in explaining the imagery used in these monuments*".

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new users[25]. Unfortunately we do not have Mnasylla's *stele* to determine how much this was the condition in her funerary scene. Judging from the inscription, it may be possible that the *stele* may have originally meant to commemorate the dying pregnant woman and the epigram would be an ingenious way to reuse the stele without touching the scene. As Boardman summarizes the issue, Mnasylla's case provides us with a scene that is made "*specifically appropriate by the epitaph*"[26]. This argument may not seem conclusive, admittedly; but it, at least, explains the central place of the pregnant woman in the scene.

Whether the *stele* which was accompanying the epitaph was originally intended for Mnasylla or for her daughter is, however, of relative importance as far as my discussion is concerned. More significant is the relationship between the depicted figures as well as the central theme of the monument – a dead mother embracing her daughter who was dying during labor. The words of the epigram are eloquent in describing the mother's grief over her daughter who passed away on her way to become a mother in her turn. The *stele* thus glorifies motherhood on two levels: through Mnasylla's everlasting grief over her beloved daughter and through the latter's death during childbirth[27].

It has also been objected that childbirth scenes may sometimes be commemorating the death of a midwife, rather than the woman giving birth. A *stele* in the Piraeus Museum representing a certain Malthake was advanced by Demand to prove the point on basis of the epithet of the deceased (fig. 5)[28]. The woman is described as being *chreste*, meaning worthy, and the epithet was sometimes given to nurses, midwives and slaves[29]. Compared with other more elaborate *stelae*, Malthake's scene is modest and done in low relief, but it does have a typical labor scene. Vedder, who does not consider the epithet in her discussion of the relief, notes that it belongs to the earliest group of attic funerary reliefs representing women dying during childbirth[30]. Leaving aside the type of the *stele* with its small, low relief panel scene, as an indication of the low status of its owner[31], the

Fig. 6. British Museum, GR 1894.6-16.1.

stele could well have been of a working woman, but of a woman who died during childbirth and not of a woman whose profession was necessarily a midwife[32]. A grave *stele* of a midwife where the pregnant woman dies during childbirth would flatly contradict the connotation of her epithet as *chreste* and, indeed, might put her professional ability into question[33]. The epigram of Mnasylla and, probably less so, the *stele* of Malthake may become thus, as Paul Zanker puts it in his study of Smyrnaean reliefs, "*instructive as the exceptions that prove the rule*"[34].

To summarize this discussion of the scenes representing women dying during childbirth, it may be concluded that they were primarily meant to highlight the conditions in which the deceased lost her life and the reasons causing her death, namely, that she lost it while trying to give life to her baby. This much may be clearly understood from the epitaph of Kleagora from Miletus which states

[25] See note 11 above and Vedder 1988, 166-167.

[26] Boardman 1985, 184.

[27] Wise 2007, 243, n. 494: "*Though the owner of the tomb is a different character in the scene, the concept conveyed in the image is nevertheless, death in childbirth*".

[28] Piraeus Museum 21.

[29] Demand 1994, 125, with notes 25, 26. See also Kosmopoulou 2001, 311-312, *N10*, *N11*, (describing a nurse).

[30] Vedder 1988, 170-171.

[31] Stears 2000, 216. Cf., however, Oliver 2000, 67, 71.

[32] Cf. Kosmopoulou 2001, 299: "*The stele of Phanostrate ... offers the only secure representation of a maia in Greek art*". See also Wise, 2007, 241 with note 492.

[33] As most recently suggested by Beaumont 2012, 46-47.

[34] Zanker 1993, 228.

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that she lost the light of her life "*while bringing a child to light*"[35]. The scenes obviously underline the greatest sacrifice a Greek woman could make. They also show how much these prospective mothers were deeply grieved and lamented by their parents and other members of their families and how much their sacrifice was publicly noted and appreciated by their families and communities[36].

Infants/Children Scenes

A large number of *stelae* shows a deceased woman with one or more of her children. They show some variety both in terms of the age of children as well as in their numbers. My emphasis here is on the scenes which include only the deceased together with her children; those which include other members of her family will be discussed in the next group. The swaddled infant we have seen on the first *stele* appears also on another gravestone in the British Museum which dates to the first quarter of the 4th c. BC., and comes from Athens (fig. 6)[37]. It represents a woman seated on a chair and wearing her clothes in an orderly manner. In front of her stands a maid holding a swaddled infant and about to give it to its mother who looks elsewhere.

Fig. 7. Metropolitan Museum of Art, 52.11.3.

[35] Athens, Epigraphical Musem, 10531; Vedder 1993, 187, with n. 125.

[36] Wise 2007, 243 n. 496, where she counts some 15 inscriptions mostly from the 5th and 4th c. BC.

[37] British Museum, GR 1894.6-16.1.

It seems that the woman probably died shortly after she had given birth to the child and left it less than six months or one year old[38], even though its face seems older than that. Another *stele* with two swaddled infants, one carried by the woman herself and another by a young attendant, is now in the Louvre Museum and dates back to the same period[39].

There are also more scenes which confirm that death of mothers within a short time after childbirth was not infrequent[40]. On these *stelae* we usually find a woman seated on a chair wearing her normal dress and slightly covering her child in her lap with her himation. A *stele* in the Metropolitan Museum of Art dates to the first quarter of the 4th c. BC and provides us with a typical scene (fig. 7)[41]. These scenes are fewer than those in which an attendant stands holding the child and they probably explain that both the mother and the child died within a short period one following the other[42].

A small simple *stele* in the Walters Art Gallery shows a woman sitting on a chair holding a swaddled infant in her hand whom she cradles and bends her head to look at it (fig. 8)[43]. In front of the woman stands a boy, holding a bird in his right hand. He seems to be showing it to the infant. The *stele* dates to the end of the 5th c. BC and contains no more figures than the woman and her two children. From the same period comes also the famous *stele* which represents a certain Ampharete playing with a child beyond swaddling age, sitting in her lap[44]. It is only from the inscription that we know that Ampharete is the child's grandmother. Nothing in the woman's features explains that she is exceptionally older than the other women who appear in similar *stele*. Like Mnasylla's epigram mentioned above, the inscription on the architrave describes the child as the "*dear infant of my [Ampharete's] daughter*", and serves as a due warning to the viewer not to read in this particular case the usual "*generic message*" often attached to other similar scenes[45].

[38] Sommer 2011, 156 and cf. Beaumont 2012, 103.

[39] Catoni 2005, 35, fig. 7. See also the comprehensive list of these *stelae* in Wise 2007, 241, n. 488.

[40] *idem*, 32-35, figs. 3, 4, 6, 7. See also the *stele* in Athens, National Archaeological Museum, 819; Louvre, 3296; Musée du Quebec, 66.246. For life expectancy of women, see Stewart, Gray 2000, 272.

[41] Metropolitan Museum of Art, 52.11.3; for other examples: Athens, National Archaeological Museum, 792; Athens, Kerameikos Museum, 4123 (a fragment).

[42] von Bothmer 1953, 186-187; Beaumont 2012, 99.

[43] Walters Art Gallery, 23.176.

[44] Athens, Kerameikos Museum, P695, 1; Catoni 2005, 35, fig. 8.

[45] Boardman 1985, 184; see also Stears 2000, 214.

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Most of the preceding *stelae* come from Athens and its neighbourhoods and date back to the classical period. For the Hellenistic age, however, we have to turn elsewhere since the funerary laws of Demetrius of Phaleron brought the flourishing gravestone industry in the city to a stop[46]. Thus the majority of funerary *stelae* in this period comes from Asia Minor and the Aegean. Those of Smyrna in Asia Minor have been lately the subject of a study which stresses their symbolic importance as representations of the identity and self-image of citizens of Smyrna, particularly those of its upper class[47]. Zanker's observations on these scenes are important since they show that, by the 2nd and the 1st centuries BC, the Smyrnaeans were adopting new modes of expression, stressing new values as well as using a new type of *stele*, the *naiskos*.

However, despite the changes showing themselves in Smyrnean *stelae*, they provide us with some evidence that women were careful to show that they were mothers as much as they cared to show their *pudicitia* and other signs of status[48]. On a *stele* in the National Archaeological Museum of Madrid, a woman is depicted in her full dress as if coming out of her house which is signified by the alter and the jewellery box behind. She is being followed by a girl carrying a baby in her left hand. The fact that the girl is a slave is indicated by her bare right shoulder[49]. Another *stele* in the Armenian School of Izmir depicts a woman standing in a frontal position and is surrounded by two children on the left and one on the right (fig. 9). The *stele* is interesting because it shows three children whose "*liveliness*" confirms that they were all her children and not slaves[50]. More noteworthy, however, is that the woman seems to be unaware of their presence beside her. Excluding the playful attitude of the little children, no emotions are represented on the *stele* between them and their mother. Compared with the attic *stelae* of the classical period, the concentration here is not on a private moment between the mother and her children; rather it is on the children as an integral part of the image of a Smyrnaean woman as being a mother in addition to her being modest and chaste[51].

Emphasis on the motherhood of the deceased manifests itself in the preceding scenes

Fig. 8. The Walters Art Gallery, 23.176.

Fig. 9. Madrid, Museo Arqueologico Nacional.

[46] Stears 2000, 219-220; Stears 2000a, 54.

[47] Zanker 1993, 212-230, and more recently Langier 2009, 64.

[48] Langier 2009, 68, 70.

[49] Zanker 1993, 223, fig. 23.

[50] Slaves' status on these *stelae* is signified by their small size, Zanker 1993, 223, fig. 21; Kurtz and Boardman 1971, 334.

[51] Zanker 1993, 223-226.

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Fig. 10. Volos Museum 376.

through the mere presence of her children. But it is also apparent from the number of children appearing with the deceased. The scenes may therefore be taken as a realistic representation of the number of children surviving their mother and the attention given to this fact by those who set up the *stelae*. Thus, while Asia appears with one child[52], the woman in the *Walters Art Gallery,* referred to above, appears with two. In an epigram dating to the end of the 3rd c. BC, a deceased woman states that she gave birth twice. However, only one of her children was still alive since she had taken the other with her to the underworld[53]. We do have some other examples which show that the deceased was survived by more than two children, though they might not be as many as those mentioned before[54]. The realistic representation on these *stelae* appears as well in its careful designation of the gender of the children and of their age. Looking at the *stele* of Asia, again, it will be easily noted that she was a mother of a boy who was old enough to walk.

Although many of the *stelae* which are studied here are not accompanied by elaborate epitaphs, or to be more precise, some of them have been separated from the inscriptions which were attached to them when they were set up, some inscriptions which were found separately may supplement our study of the scenes. They are no less expressive in their verbal stress on the circumstances attending these women's death and on the fact that they were survived by their children. In an epitaph dating to the 4th c. BC, we read the following epigram[55]:

This very dust has received the comely daughter of Damainetos,
Kratista, the dear wife of Archemachos,
Who died because of the painful fate of childbirth,
After leaving to her husband an orphan son in the house.

Unfortunately we do not have the scene which commemorates Kratista's death, but it may be possible that this orphan has survived this particular childbirth in which its mother died. In another epitaph we encounter a woman named Khairippe who boasts that she has left for her children a record to be remembered of her *arête*[56]. In a third epitaph the deceased woman asks her husband to take care of her beloved ones, which can be taken in this context to mean her children[57]. More important to note, however, that in addition to the epithets which we encounter on women's graves to commemorate their beauty and modesty, *arête* and self restraint, a woman who had a particularly painful pregnancy could also have been pitied for having died during birth leaving no child behind, *ateknos*[58]. On the other hand, the second most frequent epithet encountered on women's reliefs studied by Hooper in Koum Abou Billou in Egypt, prided them on their having been loving of their children, *philoteknos*[59]. Although he goes on to comment on the epithet saying that "*it would be a natural term to use if it is assumed that it was usually the children who provided the stele*", the

[52] Athens, National Archaeological Museum, 767; it dates to the first quarter of the 4th c. BC.

[53] Quoted in Vedder 1988, 185, n. 117.

[54] See the *stelae* of Apollonia below.

[55] Tsagalis 2008, 232, comments on this epitaph saying: "*The inscribed epitaph by its inception aims at bringing the memory of the deceased to the present. In this respect ... [its words] convey to the reader features of the deceased's past life*". See also Loraux 1981, 39-40.

[56] Quoted and discussed in Tsagalis 2008, 154.

[57] As suggested by Younger 2002, 183 with note.

[58] The complete epitaph is quoted in Vedder 1988, 185, n. 118 (see also the following note).

[59] Hooper 1961, 29. Although the epitaph of the preceding footnote dates to the 1st c. AD and the reliefs cited by Hooper date to the 3rd and 4th c. AD, they nevertheless belong to the Greek world and continue the traditions already noticed in the previous examples.

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epithet nevertheless complements our view of the deceased woman as a mother and a loving one of her children at that.

Familial Scenes

The third and final group of motherhood scenes shows women with their children as well as other members of the family. Usually the children appear old enough to crawl, stand, or walk. Sometimes the *stelae* include a man who may be identified as the woman's husband and thus signify the two roles of a woman as a mother and a wife. Both roles obviously overlap, but the presence of the father may also indicate that he was still alive when the woman died.

I begin with a touching *stele* from Phalanna in Thessaly in northern Greece (fig. 10) which dates to 430 BC[60]. It shows a woman sitting on a chair and holding a child with both hands. Both the woman and the child face a man who stretches his right hand with a bird out to the child. It is interesting to note the manner in which the woman holds the child as if handing it to his father and entrusting it to him. Another *stele* from Athens dates circa 375-350 BC and shows a man standing before his deceased wife and shaking hands with her in a usual *dexiosis* scene (fig. 11)[61]. Meanwhile a little girl stands next to the man who rests his right hand on her left shoulder. The girl stretches her right hand (now broken) to bid her mother farewell while holding a bird in her left. The unity of the family is confirmed both physically and symbolically while stressing simultaneously the double role of the deceased woman who is seated on the left side of the scene.

Another *stele* shows a deceased woman and her children with other members than her husband. On a famous *stele* from Ikaria, which dates around the middle of the 5th c. BC, sits a woman named Apollonia on a chair in the left of the scene and with her are depicted five children, "*apparently of five different ages*"[62]. She holds a baby in her lap and in front of her stands an older boy leaning against her and putting his left hand on her knee. Behind him on the floor crawls yet a third naked son. On the right stand two lads who bid her farewell. The younger one raises his right hand on to his head in a gesture of grief. Considering that her brothers Koiranos and Eurymedes were the ones who have commissioned the *stele*, it is likely that they are the two figures on the right. If this interpretation is

Fig. 11. Metropolitan Museum of Art, 65.11.11.

correct, Apollonia may have played the role of the mother for her three children and for her two young brothers. In fact, that much can be deduced from her "*matronly seated figure*"[63].

Again all these scenes date to the Classical period and come from Athens and mainland Greece and we have to rely on evidence from elsewhere for the later Hellenistic period, as already pointed out. On a *stele* from Smyrna, now in Vienna, Cemetery of Grinzing, a woman stands beside her husband in an almost frontal position (Fig. 12)[64]. A little child stands on the right next to his mother and holds her mantle with its right hand. The frontal poses of the figures reflect a drastic change from the traditions of the classical *stelae*, but more noteworthy is the lack of emotions between the figures represented. The movement of the left hand of the woman to touch the shoulder of her husband seems somewhat forced and unconventional, compared to the postures of other Smyrnaean *stelae*[65]. However, it

[60] Volos Museum 376. See also, Boardman 1985, 185, fig. 166.

[61] Metropolitan Museum of Art, 65.11.11.

[62] Golden 1993, 18.

[63] Boardman 1985, 68, fig. 53, suggests that they are all her children, however.

[64] Zanker 1985, 226-227, fig. 26.

[65] See also Zanker's comment (1993, 226): "*Almost all [figures*

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Fig. 12. Vienna, Cemetery of Grinzing.

is apparent that she is a mother of the little girl and the point was important enough to be noted in the scene.

Conclusion

What do we understand from the variety of the preceding motherhood scenes and, particularly, how far can we interpret the scenes which represent women dying during childbirth in the light of the last two groups? Seen collectively, they obviously attest to the importance of the motherhood ideal in the Greek world. Many women wanted to be commemorated as mothers, if not as good loving ones, particularly as may be inferred from the scenes which show them playing with their children. The scenes which show dead women with their swaddled infants may also be considered a proof of the importance of this ideal (though unfulfilled in their case).

Considering the importance of being a mother for a married woman and the dangers attending labor, it would seem rather possible to conclude that death during childbirth was, for Greek women, similar to men's dying in battle. Indeed this much is understood from the well known passage of *Medea*, in which she complains that men think that women's life is easier than theirs and states that she would prefer to "*stand three times in the front of battle than bear one child*"[66]. Although the passage does not make a direct comparison between women's death in labor and men's death in battle, it is clear in stating that, from a woman's point of view, labor was more perilous than fighting an enemy in a battlefield. It follows from Medea's words and from the inscriptions which underline women's sacrifice of their life to give life to their children that a woman's death during labor was considered the greatest sacrifice she can make while trying to fulfil her duty as a mother, just as dying in battle was the utmost sacrifice a Greek man can make while fulfilling his duty as a citizen[67].

Men who died in battle were commemorated on their *stelae* and so were women who died during childbirth. Admittedly each group of *stelae* had its own iconographic rules and women were represented facing death in a passive manner while the concentration was on the heroism and bravery of men. Pregnant women's passivity was usually interpreted in terms of male/female antithesis and was taken as a sign indicating that the Greeks did not compare between the two deaths. But, the difference in emphasis in men's and women's funerary *stelae* may be explained by the nature of battle women were engaging in against an unseen foe. Furthermore, it may be also understood according to the conventional rules followed by the artists. It has already been noted, for example, that labor scenes of women showing clear signs of pregnancy did not appear in the *stelae* before the Hellenistic age. What I am suggesting here is that the multiplicity of motherhood scenes on funeral *stelae* reflects a public recognition of women's vital role as mothers and of their death in labor. In a society

in the stelae] look directly out of the frame, at the viewer, and the scene of dexiosis is rarely encountered"; and cf., on the other hand, the strong sense of family unity in the Metropolitan *stele* (11.100.2) which probably includes a father, his wife, their daughter and a granddaughter, and dates to middle of the 4th c. BC.

[66] Euripides, *Medea,* 250-251.

[67] Thus Vedder 1988, 184: „*Neben dem Tod auf dem Meer und dem in Kriegertod ist es vor allem der Tod von Frauen, die beider Geburt oder im Kindbett gestorben sind, die in den Gedichten beschrieben und beklagt wird*".

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which women had "*no independent existence*"[68], the preceding motherhood scenes were probably the best we can get to acknowledge woman's role as a mother and to publicly commemorate her death on her way to become one.

[68] Blundell 1995, 114.

Eman A. Abdel-Aziz,
Kafr El-Sheikh University, Egypt
e_abdelaziz@ymail.com

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ABOUT THE HORSES IN THE *DAVA* FROM RADOVANU-*GORGANA A DOUA*

CRISTIAN SCHUSTER, DONE ŞERBĂNESCU, ALEXANDRU S. MORINTZ

Keywords: horses, Getic sites, Radovanu-*Gorgana a doua*, south Romania.

Abstract: The horse osteological remains, as well as two items made of burnt clay that rendered cabalines, have enabled the authors of the article to make a deeper analysis regarding the importance of the respective animal for the Getic communities and especially for southern Romania. There are considered the direct proofs (bones, harness pieces), but also the indirect ones (items made of burnt clay and metal with horse representations, depictions of cabalines, as well as riders on clay and metal objects).

Cuvinte cheie: cai, situri getice, Radovanu-*Gorgana a doua*, sudul României.

Rezumat: Resturile osteologice de la cai, precum şi două piese din lut ars ce reprezintă cabaline, au permis autorilor articolului o analiză mai profundă a importanţei respectivului animal pentru comunităţile getice în special din sudul României. Sunt trecute în revistă descoperirile de dovezi directe (oase, piese de harnaşament) şi indirecte (piese din lut ars şi metal reprezentând cai, dar şi imagini ale unor cabaline sau călăreţi pe obiecte din lut şi metal).

Direct proofs of the horse presence at Radovanu: osteological remains

Both the older archaeological campaigns (1971-1985) and the recent ones (2003-2008) have resulted in the identification of a relatively rich amount of animal osteological remains, in the Getic complexes (dwellings and pits) and in the archaeological strata, either belonging to the *Level I* or *II* of the *dava* situated on the *Gorgana a doua* from **Radovanu**[1], Călăraşi County. Even if this material was not fully analysed by the archaeozoologists, a first study has been dedicated to the bones recovered until 1980[2], while a preliminary report referred to the excavations of the campaign since 2008[3].

Mircea Şt. Udrescu has noticed that from the total osteological remains of *Equus caballus* (209 fragments, meaning 5.3% of the total amount of animal bones), 27 have been recovered from closed complexes, while the others have been found in the cultural layer[4]. In his opinion, *"the fragmentary character of the remains, together with the burning and cutting traces performed with sharp objects points out the fact that this species has been also used in alimentation. We consider that the use of the horse as food was absolutely accidental, being usually raised for riding and maybe also for his power force. In favour of this presumption we bring the fact that these bone fragments belong to immature animals... Two complete metapods permitted the establishing of the horse stature: 131.7 cm and 132.7 cm, values that fit into the variability limits of the horses that were usually found in the Geto-Dacian settlements"*[5].

Cabaline bones have been documented, as already mentioned, even after the investigations

[1] About the field investigations in the *dava* on the *Gorgana a doua* from Radovanu see Şerbănescu 1985; Şerbănescu 1987; Şerbănescu 1998; Şerbănescu *et alii* 2005; Şerbănescu *et alii* 2006; Şerbănescu *et alii* 2007; Şerbănescu *et alii* 2008; Şerbănescu *et alii* 2009; Şerbănescu *et alii* 2012; Schuster, Morintz, Chelmec 2005; Schuster, Şerbănescu 2007; Şerbănescu, Schuster, Morintz 2009.

[2] Udrescu 1982.

[3] El Susi 2009.

[4] Udrescu 1982, Tab. 1.

[5] Udrescu 1982, 141.

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carried out in 2008, but they have been recovered exclusively from *level II*. Thus, in the surfaces *Q*, *U*, *V*, *R* and *S*, but mostly in the proximity of those two outdoor overlapped hearth (out of which the upper one, *Hearth no. 5* was decorated[6]), that were situated in the center of the *Surface Q*, between the *Dwellings no. 28* and *29*[7], 16 bone fragments could be identified, meaning 5.4% from the total amount, coming from four individuals[8]. Among these, it could be noticed the presence of a 1st posterior phalanx with a length of 84 mm, *a distal tibia* with dimensions of 71/42.5 mm and a calcaneus with the maximal length of 104.5 mm, very probably, belonging to an adult individual[9]. The author of the archaeozoological study has noted that: *"out of the four individuals, just one had an immature body, the others being adults; we do not exclude the consuming of the horse meat, as many broken bones have come from regions of alimentary importance*"[10].

For comparing the finds from **Radovanu**, the archaeozoologists have focused their attention upon the Getic sites situated in its proximity, or in more remote positions, but all being on the territory of Muntenia. The archaeological investigations in the area of **Prundu** – **Greaca** – **Căscioarele** have resulted in the identification of some horse bones, for instance in the *Dwelling no. 22* and *Pits no. 2* and *no. 19* on the spot "*Şuviţa Hotarului*", as well as those from "*Valea Fântânilor*" and "*La Slom*"[11]. Their analysis shows that the proportion the osteological remains belonging to this species has reached 4.1-4.7 % of the total animal bones recovered[12]. It is interesting to see that a clear statement has been done, that "*this small percentage shows that the species has not been used for alimentary purpose, except as a subsidiary*".

The percentage, established by the number of fragments (69), of the osteological remains belonging to *Equus caballus* from the settlement at **Vlădiceasca**[13] has reached 3.6%, fact that urged M. Şt. Udrescu to consider again that its use in alimentation was done in a very small scale[14]. Those two statures (of 134.9 and 139.9 cm) determined by the metapods, "*are between the variability limits of the "regular" horses, currently used for different works in the household, the second one being closer to the "elite" horses, used for riding*"[15].

As a matter of fact, as a conclusion to the analysis of the osteological material of the site, Valeria E. Ionescu[16], has noted that "*regarding the horses, there are no proofs that could document their use in alimentation; most of the long bones being complete",* continuing by the opinion that *"the relatively high stature of the horses for the analyzed period* (3rd-2nd and 2nd-1st c. BC)" is "*a possible hint about the concern for this species*".

Horse osteological remains, consisting in just a jaw, have been discovered in the *Dwellings no. 2* and *3* from **Borduşani** – ***Popină***[17]. Discussing about the horses breeding in the *dava* from **Grădiştea**, Mircea Şt. Udrescu, in study since 1992 had mentioned that "*the height alone, which could be established based on a metatarsal bone, could get fit into the lower limit of the "elite" horses of the Geto-Dacians*"[18]. In another article, also referring to the animals from the mentioned site, Carmen Hrişcu, Luminiţa Băjenaru and Mircea Şt. Udrescu would note late that regarding the horses, the measurements taken from other remains had led to the conclusion that they "*belonged to the heights of "regular" horses, most frequently found in the Geto-Dacian communities*" and that "*the traces of cutting, as well as the existence of some burnt pieces, suggested beyond any doubt the use of this species as a source of food*"[19].

Also considering the animal breeding at the community in the *dava* from **Grădiştea**, Valeriu Sîrbu has mentioned that the cabaline remains have reached 6-8% of the total determined individuals, at the same time noting the differences between the quantity of bones recovered from distinct complexes[20]. Thus, for instance, in *Pit no. 147* it was discovered a fragment of a proximal ulna and another one of a femoral condyle, in *Pit no. 148* a part of a metatarsal bone, a phalanx and a fragmentary sacrum, while in *Pit house no. 12* thee were 34 osteological pieces (calcaneus, metatarsal bone etc.), some of them bearing cutting marks; those remains ha belonged to regular

[6] Şerbănescu, Schuster, Morintz 2009, 246, fig. 3; Şerbănescu *et alii,* 2012, 114, fig. 12.

[7] Şerbănescu *et alii,* 2012, 108 f.

[8] El Susi 2009.

[9] El Susi 2009, 139, Table 2.

[10] El Susi 2009, 140.

[11] Hrişcu, Bejenaru, Udrescu 1996, Tab. 1.

[12] Hrişcu, Bejenaru, Udrescu 1996, 135.

[13] Ionescu 1975, 178, Tab. 1; Ionescu 1976, 143 f., Tab. 13.

[14] Udrescu 1990, 84, Tab. 1.

[15] Udrescu 1990, 84.

[16] Ionescu 1976, 151.

[17] Trohani 2005, 13, 16.

[18] Udrescu 1992, 48.

[19] Hrişcu, Băjenaru, Udrescu 1997, 99.

[20] Sîrbu 1996, 39. In his opinion, *"For the moment, still, the discovered bones have no indubitable traces that would proof that this animal could have had a significant role in alimentation"*.

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horses, in fact used also by the contemporaneous populations from Central and Western Europe[21].

In a synthesis about the animal breeding at the Geto-Dacians from the southern part of Romania (especially in its south-eastern one) compared with other regions (Moldavia, for instance), M. Şt. Udrescu would emphasize that the cabalines, when referring to the proportion of fragments in the total excavated amount would reach 2.6-6.5%, "*a too small percentage for discussing about a species of alimentary significance*"[22]. But, he also shows that "*the persistence of the osteological remains belonging to the horse among the refuse remains, the existence of their cutting with sharp instruments, as well as the burnt bones, leave no doubt about the use of this animal also in alimentary purposes*".

In another article, since 1985, the same Udrescu, using for analysis several sites of southern Romania (Radovanu, Popeşti, Vlădicească, Cârlomăneşti, Piscu Crăsani) has mentioned that «*nous n'avons enregistré qu'une faible proportion (2,6-5,9%) de fragments attribuables au cheval. Cette situation s'explique en premier lieu par le fait que le cheval, utilisé de plus en plus dans des buts militaires et comme animal de traction dans l'exploitation agricole, était tombé au second plan sous le rapport alimentaire* »[23].

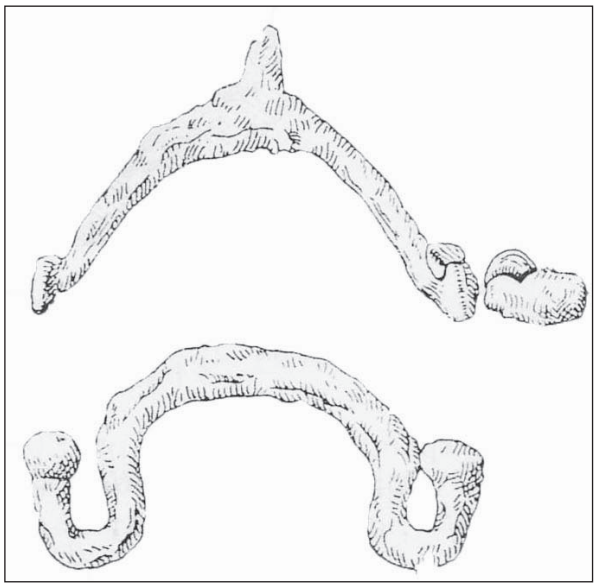

Fig. 1. Radovanu – *Gorgana a doua*. Iron spurs (after Şerbănescu 1985).

In a very interesting article, it was presented the information regarding the "*Traumatic lesions in domestic animals and some empirical healing practices in the Geto-Dacian period*"[24]. Unfortunately, the authors, Dardu Nicolăescu-Plopşor and Mircea

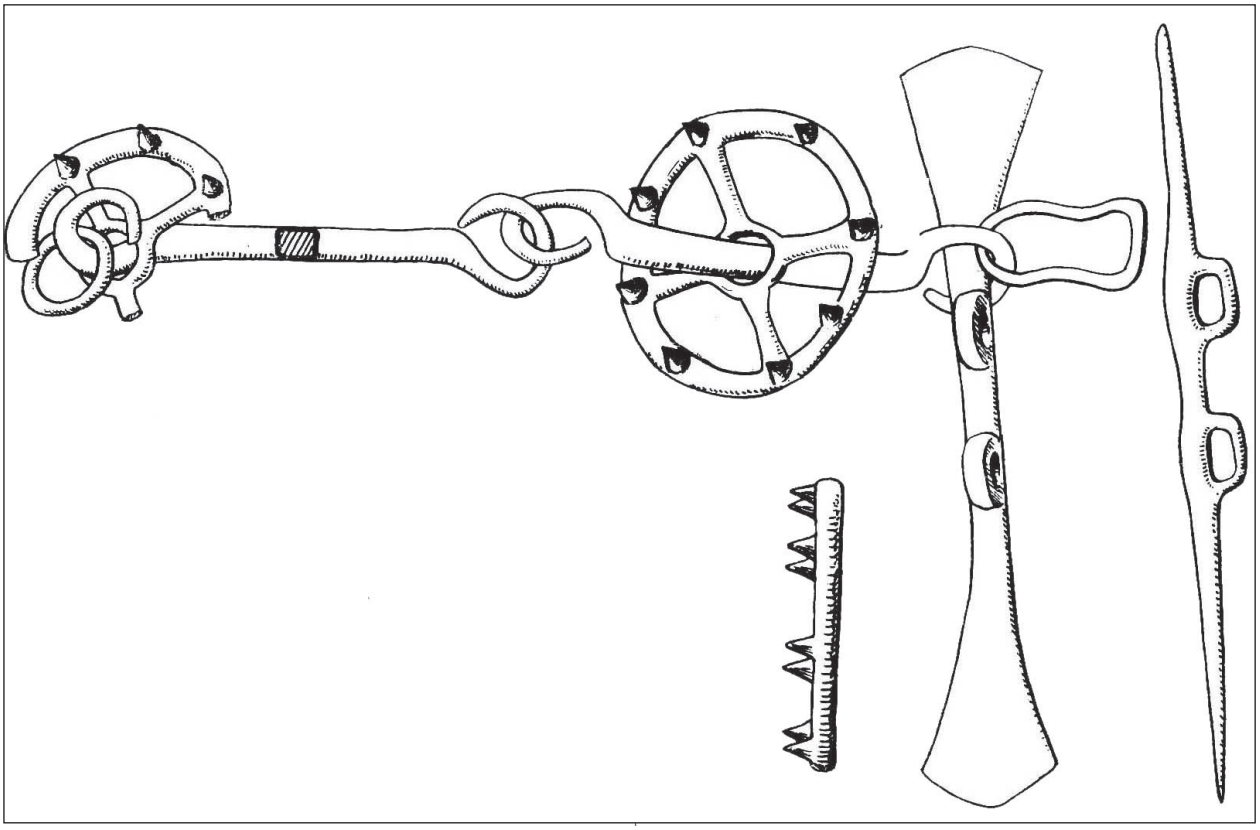

Fig. 2. Radovanu. Tumulus: a horse bit (after Vulpe 1976).

[21] Tarcan-Hrişcu, Băjenaru, Udrescu 1996, 301 ff.

[22] Udrescu 1985a, 64.

[23] Udrescu 1985b, 131.

[24] Nicolăescu-Plopşor, Udrescu 1987.

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Şt. Udrescu, when they discussed about the fractures in large animals, especially referring to the rib ones, do not make a clear distinction between *Bos taurus* and *Equus caballus*. It was just general information, mentioning that most of the fractures "*are in transversal plan, while those in an oblique one have different degrees of obliquity*"[25]. It could be observed that the "*location of the fractures in most often in the area of maximal curvature of the ribs and just in rare cases in the proximity of the rib-vertebral joint*" and that "*there are no signs to support the assumption that the fractures had been opened and over infected*".

The fractures identified on the ribs of some of the horses from the Getic sites at Radovanu (one case), Vlădiceasca (two cases), Piscu Crăsani (eight cases) and Popeşti – *Nucet* (11 cases)[26], in the opinion of the archaeozoologists, "*could not be provoked*", "*otherwise than by the humans*"[27]. Possibly that at the horses, some of the fractures could be caused as a result of some human acts during riding (in fights), or during hunting.

Such factures could often be overseen, especially that they "*have no obvious consequences upon the productivity or behavior*" of the horses[28]. Concerning the healing of these traumas, it could be connected with the "*natural way of being diminished by the breathing mechanism, but also with the muscle-fibrous and tegument loco-regional contention"*.

Indirect proofs of the horse use by the Getae from Radovanu

Harness pieces. The presence of the horse at **Radovanu** has been also indirectly proven. Some metal items have been discovered, which show that *Equus caballus* has been used for riding. In *Dwellings no. 2, 10 and 17*, belonging to the *Level II*, some iron spurs have been found (fig. 1)[29], "*made of bars, with different transversal cross-sections: plan convex, squared, or rounded. They have a semicircular shape and have semicircular knobs, small perforations for binding, or a small hook at their ends in the middle part of the semicircle, the spurs have, more or less outlined spikes*"[30].

Also, in 1937, on the territory of the Radovanu village, have been discovered by hazard, in a cremation burial situated in the mantle of a tumulus, a *sica*, two spear points, a chain mail, but also a horse bit (fig. 2), dated at the end of the 2nd c. and beginning of the 1st c. BC[31]. Also on the Lower Argeş, upstream from Radovanu, in the *dava* from **Popeşti**-*Nucet* and in the *Tumulus no. 4* from **Novaci**, other similar horse bits could be identified, being used by the Getae between the year 150 BC and the Augustus epoch[32]. Not far from Radovanu, at **Chirnogi**-*Terasa rudarilor*, in *Burial no. 49*, mixed with the cremated bones of a deceased individual, have been discovered the horse bit, two spurs and two buckles[33]. The horse bits belong to the *Type III* established by Ioan Glodariu and Eugen Iaroslavschi[34]. The spurs, dated at the end of the 2nd c. and beginning of the 1st c. BC[35] have been also documented in other sites from the neighboring areas of the site from Radovanu; we mention here **Popeşti** and **Vlădiceasca**[36]. To the same period belong the buckles that were also part of the harness pieces, being similar to those from **Novaci**-*Tumulus no. 4*[37].

The zoomorphic plastic representations from Radovanu. During the older archaeological campaigns, in the *dava* from **Radovanu** – *Gorgana a doua* have been discovered some items made of burnt clay, rendering human or animal personages. Besides the anthropomorphic figurines[38], two zoomorphic ones have been found (a ram horn and an animal head of unknown species[39]), together with several avimorphic lids[40]. During the investigations we had undertaken more recently, namely in 2004[41], two figurines representing horse heads have been also brought to light[42].

The first one has been discovered in the *Storage pot no. 2* from *Section no. XIII*[43]. Inside the vessel,

[25] Nicolăescu-Plopşor, Udrescu 1987, 64, fig. 1-2.

[26] Nicolăescu-Plopşor, Udrescu 1987, Tab. 3.

[27] Nicolăescu-Plopşor, Udrescu 1987, 67.

[28] Nicolăescu-Plopşor, Udrescu 1987, 67.

[29] Şerbănescu 1985, 27, fig. 4/14.

[30] Şerbănescu 1998, 175.

[31] Vulpe 1976, 209, fig. 18; Sîrbu 1993, 73, fig. 12.

[32] Vulpe 1976, 113 f.; Turcu 1979, pl. IX/1; Trohani 1997, pl. XVII/2.

[33] Şerbănescu 1998, 262.

[34] Glodariu, Iaroslavschi 1979, pl. 73/17, 22-24.

[35] Glodariu, Iaroslavschi 1979, 126 f.

[36] Trohani 1975, fig. 3/1; Turcu 1979, pl. IX/6.

[37] Vulpe 1976, 207, fig. 16/1, 7, 12.

[38] Şerbănescu 1985, 27, fig. 2/1-2; Sîrbu 1993, 120; Sîrbu 2009, 45.

[39] Şerbănescu 1998, 172. See also Sîrbu 1993, 125 and Sîrbu 2009, 61.

[40] Şerbănescu 1985, 25, fig. 2/5; Sîrbu 2009, 61. We should not forget here also the bronze oil lamp bearing zoomorphic representations, see Trohani, Şerbănescu 1975, 284, 286, fig. 9/1; Turcu 1979, pl. XXXVIII/1-3; Şerbănescu 1985, 27.

[41] Şerbănescu *et alii,* 2005, 287.

[42] The items have been also mentioned by Sîrbu 2009, 61.

[43] Şerbănescu *et alii,* 2013, 69, fig. V-VI.

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that was preserved in a proportion of 65%, being deteriorated just in its upper part, some bigger parts, as well as beads of adobe have been found, some of them bearing imprints of the poles (the maximal diameter that could be traced has measured 0.12 m) as well as traces of the wickerwork, ashes, charcoals, different broken animal bones (coming from bovines, ovicaprines, suines) and rare ceramic fragments (coming from hand-made or wheel-made pottery). Among bones, about 0.70 m above the conical bottom of the receptacle (which had on its base a "*panel hole*"), it was found an almost complete horse skull, put horizontally, with its base downwards and with its "*sight*" towards south-east.

At 0.05 m above the skull, in the north-western side of the storage pot, in a thin layer of ash (of 0.03 m), pigmented with beads of adobe and charcoal, it was found a horse head (with its preserved length from mouth to ears of 6.4 cm, its maximal width being of 3 cm) and part of the neck, both having a triangular cross-section and belonging to a cabaline, being made of burnt clay. Its colour is greyish outside, inside and in the breakage, the item being well smoothened and burnished at the surface, especially in the region of the neck, due to its repeated contact with the hand. Unfortunately, it was fragmentary preserved, very probably coming from a zoomorphic receptacle, or from a vessel with a beaker shaped as a horse head (figs. 3-5). For this we bring as argument the perforation that starts on the forehead of the horse, piercing the head and the arched neck, as much as it was preserved. The forehead part is shaped as a "*horn*" (with a height of 1.1 cm, with a diameter on its point of 1.1 cm and of 1.7 cm on its base; the perforation having an opening of 1 cm), thus giving the animal the appearance of a unicorn (the length from the point of the "*horn*" and up to the limit of the preserved neck has measured 6.3 cm). The ears, chirpy from ancient times, are slightly turned to the back. Also affected since ancient times was the end of the muzzle. On the forehead and on the upper part of the muzzle there were four rows of circles. They have been also done on the outer side of the ears and on the lateral parts of the muzzle, there existing a raw that ran in parallel with the muzzle and another one that was vertically placed. Also in lateral, on the lower segment of the muzzle, some hachure have been "*cut*", rarer on a side and denser on the other.

It is obvious that the impressed circles (with a slightly oval shape and a maximal diameter of 0.4 cm), all of them done with the same instrument, have rendered the bridle, very probably decorated

Fig. 3. Radovanu – *Gorgana a doua*. Fragmentary horse head; image of the right side. Photo Gh. Chelmec.

Fig. 4. Radovanu – *Gorgana a doua*. Fragmentary horse head; image of the left side. Photo Gh. Chelmec.

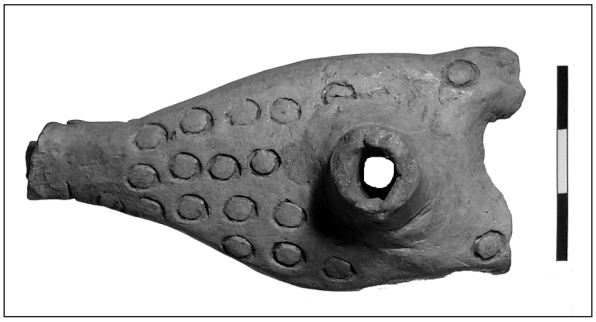

Fig. 5. Radovanu – *Gorgana a doua*. Fragmentary horse head; image of the upper side. Photo Gh. Chelmec.

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Fig. 6. Radovanu – *Gorgana a doua*. Fragmentary horse; image of the left side. Photo Gh. Chelmec.

Fig. 7. Radovanu – *Gorgana a doua*. Fragmentary horse; image of the right side. Photo Gh. Chelmec.

Fig. 8. Radovanu – *Gorgana a doua*. Fragmentary horse; image of the front side. Photo Gh. Chelmec.

with disk-shaped appliqués. The hachure, even if could possibly be other components of the bridle, they are more probably hairs that some of the horse have in the area of the mandible or, hard to believe, the mane. It can be also taken into consideration the working hypothesis that the hachures could represent the grain sack fixed on the head of the horse, so that he could eat.

The second item has been identified in the *Surface no. XXXI*, from *Dwelling no*. *21*, belonging to *Level II*. The fragmentary item, rendering just the head and part of the horse's neck, it was found 0.45 m west of a hearth, that, at the moment of its discovery was in a very poor condition (it probably had a rounded shape, with a preserved diameter of 0.94 m). The cabaline head (with a maximal length from the mouth up to the ears of the animal that reached 3.6 cm), curved at the middle, was rendered in a realistic manner, had an almost square cross-section (maximal dimensions of 2 x 1.9 cm) and rounded corners (figs. 6-9). The eyes mouth and pricked up ears, the main rendered by incised lines, as well as the bridle. The straps of the bridle went round the neck beneath the ears, then towards their frontal part, unified in front of the ears, went down on the forehead, and bifurcated to the left and right before the nostrils. They stopped near the mouth, suggesting the existence of a horse bit, afterwards running down towards the neck of the horse. On the forehead of the animal it could be noticed a row of four impressed circles (some of them slightly oval due to the curvature of the object, with a maximal diameter of 0.4 cm), that pointed to the existence of the bridle straps and some disk-shaped appliqués. Probably in order to point out the presence of the horse bit in the mouth of the animal, part of the frontal teeth on the mandible have been represented by three almost triangular impressions. The paste used for the zoomorphic idol was one of a good quality, without any impurities. Its burning was also good, the obtained colour being of greyish nuance.

The analogies with two fragmentary item in the *dava* from Radovanu – *Gorgana a doua* are, unfortunately, just few. Upstream, on the Argeş river, in the **Popeşti** – *Nucet dava*, "*in the southern bank of the surface Z"/1954, at the depth of 0.80 m, among the burnt and leveled remains of a surface dwelling belonging to level III*", of the first half of the 1st c. BC, Corneliu Beldiman has found by hazard a burnt horse clay miniature, in a fragmentary condition (its preserved length = 6.2 cm, the width between the mane and the leg end = 3.2 cm)[44]. This (fig. 10) has been modeled

[44] Beldiman 1994, 26 f., fig. 2/2. See also Sîrbu 1993, 124 f.

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"*of paste mixed with fine sand, of light brick-color, with strong traces of secondary burning on a side (in longitudinal plan). The small head, had muzzle and conical ears (the left one being broken in ancient times), without eyes and mouth, long neck, arched downwards, semicircular mane, rendered by pressing the clay between the fingers. The body, with cylindrical shape, out of which the short, conical legs have been pulled, the same as the tail (it was preserved just the right front leg, the others, the same like the tail, being broken in ancient times). On the body it could be noticed the presence of five incised lines*".

Fragments of horses and men figurines discovered in constructions and their pits from **Cârlomăneşti**, seem to document the existence of some riding personages, namely of some knights[45]. Thus, "*the biggest fragment comes from the anterior part of the body, with the starting point of the front legs and with the largest part of the neck situated at 45° from the body horizontal plan. Determinant for this interpretation is the typical shape of the horse neck (with a triangular cross-section), as well as the man representation, by oblique incisions, on one of his sides*"[46]. It is important to point out here that the neck of this horse had also a triangular shape, the same like the first described object, from Radovanu.

Statuettes rendering horses have been found at **Băiceni** (4th-3rd c. BC)[47]. Valeriu Sîrbu has mentioned "*an almost complete figurine that probably rendered a horse – 4th-3rd c. BC – information by I. Tentiuc*", discovered by chance at **Hlingeni**, in Republic of Moldova[48]. In the settlement of the free Dacians from **Şcheia**, in the burning chamber of an oven, it was identified a fragmentary horse, whose muzzle and tail have been broken in ancient times[49].

Burnt clay horses have been also discovered shaped as protomas. Even on the Argeş River, in the *dava* from **Popeşti** – *Nucet*, it was brought to light a fragment of a *rython*[50]. Such items have been found in Romania at **Piscu Crăsani, Calomfireşti** (fig. 11)[51] and **Cetăţeni** (if it really renders a

Fig. 9. Radovanu – *Gorgana a doua*. Fragmentary horse figurine, image of the back side. Photo Gh. Chelmec.

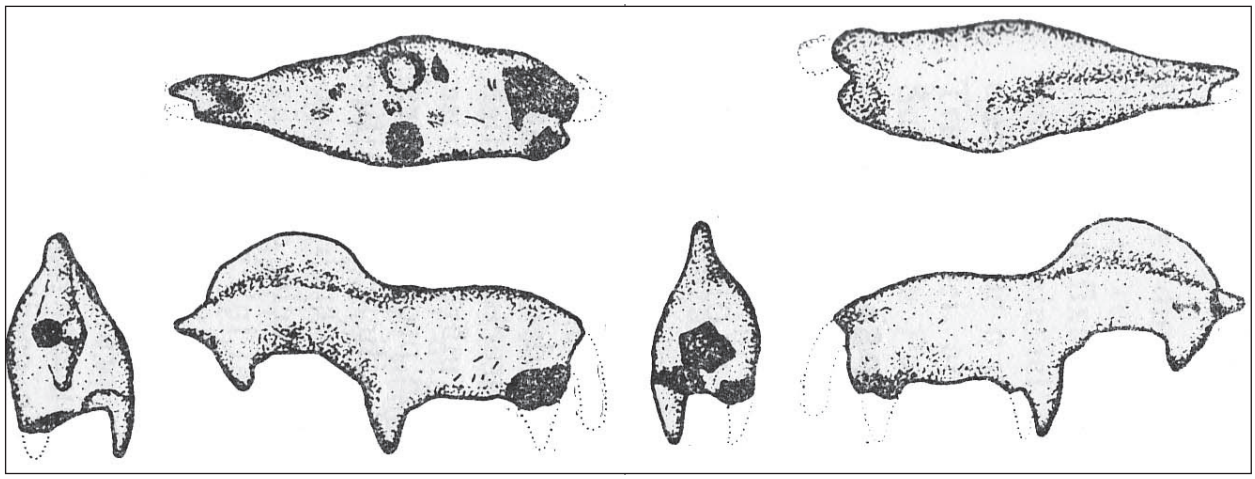

Fig. 10. Popeşti – *Nucet*. Clay horse (after Beldiman 1994).

[45] Babeş 1977, 336 f., 340, fig. 10/6-8, 11/1-2. See also Sîrbu 2009, 67, fig. 13/2-3.

[46] Babeş 1977, 337, fig. 10/6.

[47] László 1969, 85, fig. 6a-b.

[48] Sîrbu 1993, 124.

[49] Sîrbu 1993, 125, fig. 55/3.

[50] Vulpe R 1955, 253, fig. 13/6; Turcu 1979, 131, pl. XXXVI/4; Conovici 1987; Sîrbu, Florea 2000a, fig. 52/1.

[51] Popescu 1941, 189 f.; Conovici 1987, 92 f., fig. 1-2; Mirea, Pătraşcu 2006, 35, fig. 46/1.

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Fig. 11. Calomfireşti. Horse protomas (Photo P. Mirea).

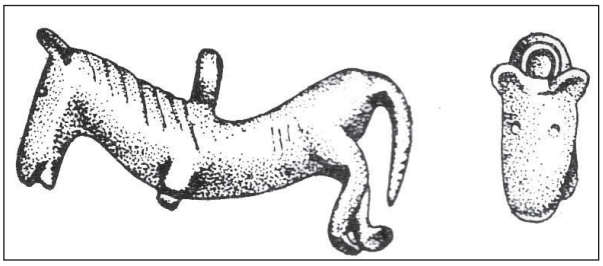

Fig. 12. Bâzdâna. Bronze horse (after Tătulea 1984).

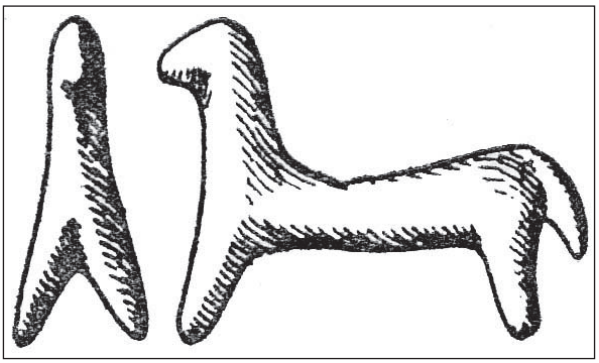

Fig. 13. Bujoru. Bronze horse (after Moscalu, Beda 1988).

Fig. 14. Ţibrinu. Bronze horse (after Irimia 2011).

cabaline)[52] while in Bulgaria a similar object of this kind with a horse protome has been discovered on the bank of the **Mândren** Lake[53].

At **Bâzdâna** it was also found a zoomorphic figurine, namely a very nicely modeled horse (fig. 12), as part of a larger object, made of bronze and dated at the end of the 4th century and beginning of the 3rd c. BC[54]. Upon it there were no harness pieces but, in turn, it could be recognized the animal muzzle, the eyes, pricked up ears and the mane. This item was partly similar to those made of bronze from Hallstatt ones, from **Bujoru** (fig. 13)[55] and **Ţibrinu** (fig. 14)[56].

The bridle rendered on both items from **Radovanu**, the same as the harness straps of a horse from Cârlomăneşti[57], corresponded to the harness mode used by the Thracians, as represented in some scenes, or upon silver, or gold appliqués[58]. As examples, of those representations, we mention the helmet from **Agighiol**, some appliqués in the hoard from **Letnica** and **Lukovit,** as well as the *phalera* from **Galiče**, the last three sites being from Bulgaria. That on the harness pieces the Getae used also to fix appliqués seems to be confirmed by the image of the horse rendered on the barrel-vessel from **Răcătău**, where the strap that girdled the chest and neck of the animal was decorated with roundels[59].

[52] Crişan 1969, 194, fig. 106/4.

[53] Conovici 1987, 96 with lit.

[54] Tătulea 1984, 102, fig. 7/3

[55] Moscalu, Beda 1988, 29, figs. 3/11, 4/5.

[56] Irimia 2011, 27, pl. I/1, XIII/1.

[57] Babeş 1977, 340, fig. 10/7.

[58] Sîrbu, Florea 1997, 91, figs. 8/2, 17/1-5, 18/3, 22/1, 41/8, 10.

[59] Sîrbu, Florea 1997, figs. 73, 80/1.

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The discovery of those two fragmentary burnt clay horses, the osteological remains in some dwellings, *Storage pot no. 2* and the archaeological layer, the same as the iron spurs that conform the existence of horse riders in the *dava* from **Radovanu** – *Gorgana a doua*, attest the fact that *Equus caballus* has played an important role for the Getic community from there. But, as shown by Valeriu Sîrbu, we also believe that in the case of this *dava*, "*we don't have sure evidences which could point to a cult dedicated to the animal itself*", but, we must rather admit that "*there were probable the animal sacrifices meant to assure the breeding and enhancing the number of animals, unlike those for expelling the "evil spirits" beyond the borders of the human community, the same as those against disease, famine, drought etc. (inhumation of complete animals, or heads in settlements or at their periphery), due to the supposed magic power which has been assigned to them*"[60].

Even if we cannot be sure of this sense, it seems that the *Storage pot no. 2* has been deteriorated in its upper part even beginning with the Getic period. Subsequently, this process has continued, so that, at the moment of its excavation by us, the receptacle was destroyed in the region of the rim in a percentage of 35%. For backing up this hypothesis we can use also the fact that inside the vessel have been found adobe pieces, charcoals, ashes, ceramic fragments, all showing that the pot has been used for "*the storage of debris*". Seeming, the vessel has taken over the role of a pit. "*A pit*", which, by its content and implicitly is accepted by most of the archaeologists, should have been of "*domestic*" use. But, we cannot elude the idea that the same pot could have served in a certain moment as a "*cultic pit*"[61]. It is known that this kind of pottery has been created for storing food – grains. Maybe, in order to expel the famine or drought, the community from *Gorgana a doua* has inhumed a horse head. The presence of the burnt clay horse head, most probably a part of a recipient commonly used for libations, seems to urge us to consider *Storage pot no. 2* as being the expression of an attempt of relenting the divinity for expelling the drought. Maybe, at that moment the Argeş had a smaller debit, or the river course was away from the place where it usually flowed, namely the base

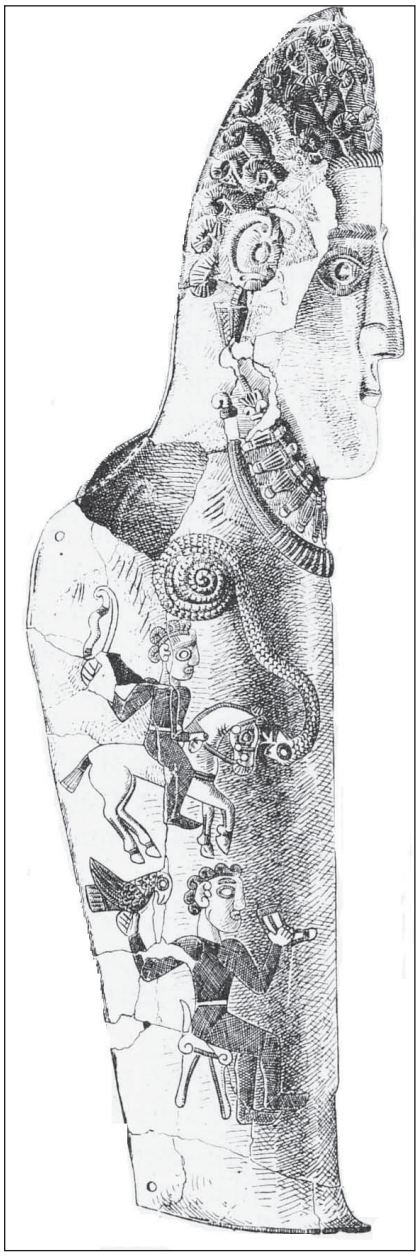

Fig. 15. Agighiol. Grave no 1 (after Berciu 1969).

of the *dava*, "*migrating*" to the north[62]. Or, maybe, the springs that even nowadays exists on the high terrace of the Argeş, some of them even in the proximity of those two *davae*, has diminished their debit, or have been temporarily dried, thus the community lacking a rich water supply.

If we are allowed now, we could also mention that even in present, at Radovanu the rain clouds are carried by the wind almost exclusively from south-east, namely exactly towards the place where the horse head from the storage pit had its "*sight*" to. We should not overlook also the fact that the Argeş

[60] Sîrbu 1993, 131. See also Sîrbu, Florea 1997, 43.

[61] In the category of the Getic "*cultic pits*" have been also included "*those containing... animal inhumations... When we discuss about unburned animal parts, or cremated remains of complete animals, or just their parts, then, most probably we refer to the offering brought to the divinity, or to deceased people, by the nature of the context in which they have been found*", Sîrbu, Florea 1997, 45.

[62] If, initially the river flow to the base of the high terrace in its right side, gradually its course has "*migrated*" to north-east. At the moment when the systematic archaeological excavations started at the beginning of the '70 in the 20th century, the Argeş was flowing at a distance of about 2.5 km eastwards. Cf. Morintz, Şerbănescu 1985, 5; Schuster, Şerbănescu 2007, 241.

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Fig. 16. Agighiol. Helmet (after Berciu 1969).

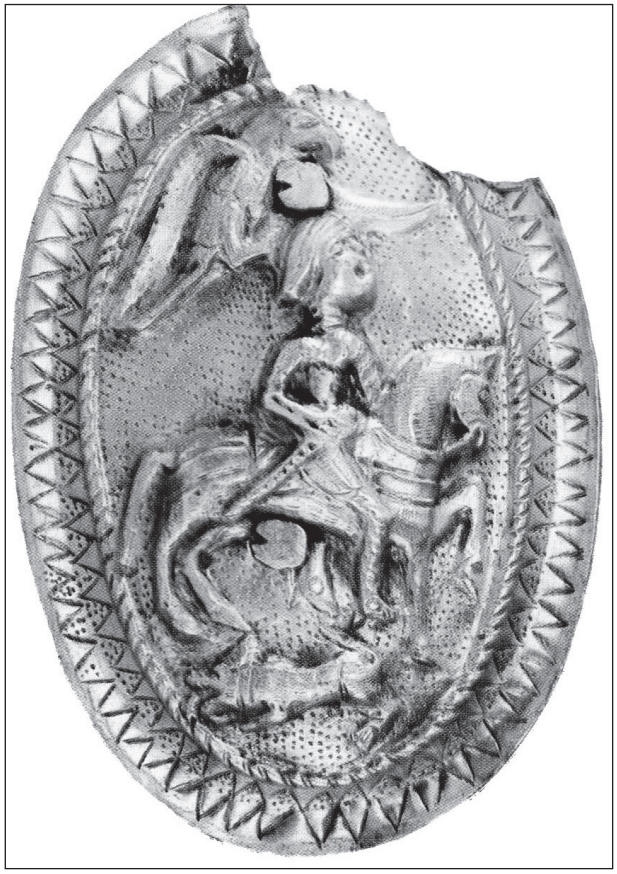

Fig. 17. Surcea. Phalera (after Glodariu, Moga 1994).

River flows to south-east[63], and there is also the Danube[64].

Some the archaeological finds from Muntenia and Moldavia attest that the Getae used to bring offerings to the protecting divinity of the water sources[65]. In this category we could also include the discovery from **Conţeşti**, a site situated on the bank of a lake[66], "*the road*" of wood beams in the swamp from **Lozna**, where, amongst other objects a horse bit has been also placed, as well as the wells form the *dava* from **Popeşti** – *Nucet*, on the Argeş, **Ciolăneştii din Deal**, on the Câinelui (Dog's) creeks, and **Brad**[67]. These last three complexes belong to the end of the 2nd c.-beginning of the 1st c. BC. According to one of the specialists opinion, "*A cult of the springs, of the water, of the rivers had all the Indo-European people and the Dacians must have also had. If the existence for the Geto-Dacians of a divinity that could be similar to Fons and a festivity like Fontinalia are for now just hypotheses, very probably the name of some rivers or of some river springs must have had the name of the water divinity, as we find in the Celtic or Roman world*"[68].

We have reached the conclusion that those two fragmentary burnt clay horses in the *dava* from **Radovanu** – *Gorgana a doua* have been modeled by the same person. In this sense, we bring as arguments the paste (of good quality, without impurities), the burning mode, which resulted in the same colour of the items and not at the least, their decoration, which rendered the harness pieces.

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[63] By the way, the easiest access from the Danube to the *dava* from Radovanu is the one upstream, along the river. Also from south-east, we believe that it was the most accessible way for the enemies. Of course, another route from the river or its neighbouring lakes seems to be the one from Căscioarele. It is only that, at the time when the *dava* from Radovanu were in use, the one from Căscioarele – *D-aia parte* would cease its existence (in the 3rd c. BC), cf. Şerbănescu 1998, 6-79 with lit.

[64] Regarding the river and its importance for the Getae, we should not forget what it was written in the *Comments of Servius*, Virgiliu, II, 497: "*Aufidius Modestius has stated that he read about the Dacians who had the custom that, before going to the war, did not start their job before drinking by their mouth from the Istros a certain amount of water, like as a sacred wine and before making an oath that they would not return to their motherland before killing their enemies*".

[65] Sîrbu, Florea 1997, 44.

[66] About this find see Vulpe, Popescu 1976; Sîrbu 1993, 131; Sanie 1995, 49 ff.

[67] Petrescu-Dîmboviţa, Sanie 1972, 257; Petrescu-Dîmboviţa 1974, 286; Sanie 1987, 127 f.; Ursachi 1995, 80 ff., fig. 24; Sanie 1995, 44 ff., pl. XII-XIII; Palincaş, Lippert 2003. For later periods, some wells have been documented at Bucureşti-*Străuleşti* (2nd-3rd c. AD) and Ghermăneşti (4th c. AD), see Sanie 1995, 45, 47.

[68] Sanie 1995, 48 f.

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We don't know if the person who has modeled the horses was a "*specialized*" local, or he was an itinerant craftsman. Considering also the small number of anthropomorphic and zoomorphic statuettes in this fortified settlement, we can hardly admit that there could have existed a workshop proper, similar to the one from **Cârlomăneşti**[69].

There are also differences between those two objects from Radovanu. One of them was an idol; the second was very probably part of a recipient. It is obvious that the respective "*vessel*" has been used for the liquid storage, being probably used during some cultic activities. It is true that the beak of the "*unicorn horn*" is relatively small, becoming even narrower when passing into the horse's neck, so that the liquid quantity that could have been poured was rather limited, with a small flow that was rather a drip.

Niculae Conovici, when discussing about the *rython* with a horse protoma from **Piscu Crăsani**, has considered that "*other vessels also, without having the shape of a horn, could have also served as a rython*", mentioning here the receptacle "*decorated with a ram, or a Billy goat, under which it was a small tube for pouring*", discovered at **Popeşti**, as well as the "*horned bird*" vessel (discovered on the territory of the **Bucharest** city) and those paralellipipedic ones from **Răcătău**, "*could have had the function of a rython*" [70]. Starting from this idea, we can also include in this category the receptacle with horse head from **Radovanu**. The functionality of these vessels was as cultic receptacles, so that "*by analogy with the metal rythons we can assume that ceramic replica has been used also for libations for worshipping some divinities, maybe even by the noble that ruled the settlement, as spiritual chief of the tribe*"[71].

The *rython* from **Radovanu** has been discovered, as we could already see, in a storage pot, above the skull of a real horse. Is it possible that the respective storage pot could have belonged to the "*chief*" of the *dava*? It is certain that the vessel was part of a row of other such storage vessels, placed in a north-south arrangement and situated in the south-eastern part of the settlement.

The other item from **Radovanu** has been discovered not far from the hearth of a dwelling, whose dimensions in furniture have been rather impressive. This dwelling was not different from the others from the settlement. Speculating here also, we could think that both horses, being

[69] Babeş 1977, 343.

[70] Conovici 1987, 97. See also Sîrbu 1995, 75.

[71] Conovici 1987, 98.

Fig. 18. Polovragi. Plaque (after Marinescu 1977).

Fig. 19. Lupu. Plaque (after Spânu 2012).

Fig. 20. Lupu. Plaque (after Spânu 2012).

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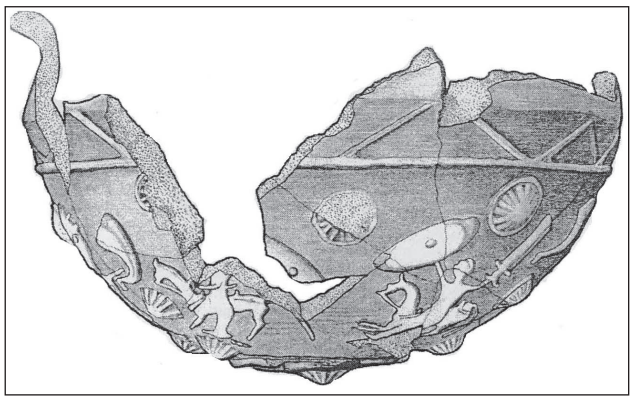

Fig. 21. Zimnicea. Fragmentary cup (after Spânu 2006).

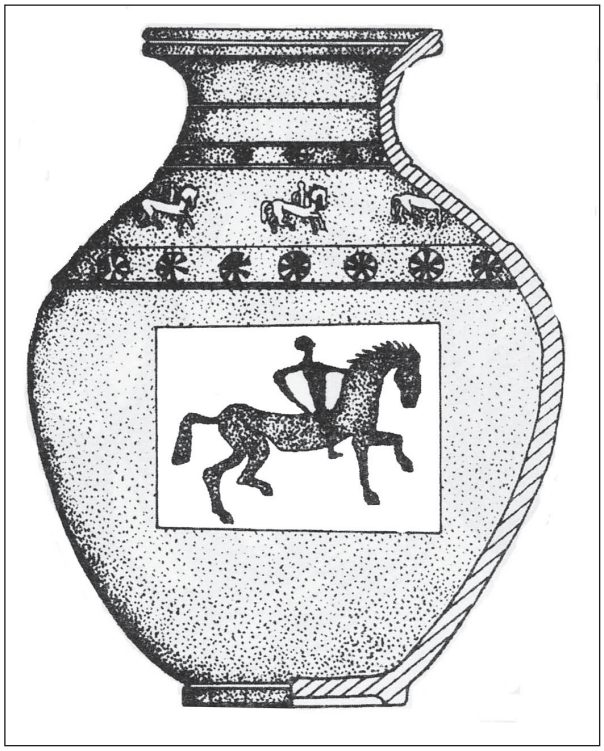

Fig. 22. Zimnicea. Pythos (after Moscalu 1983).

done by the same hand, maybe for the one and same beneficiary, *House no. 21* and *Storage pot no. 2* have been owned by a single person, or family. The respective personage was one of the chiefs of the *Level II* of settlements or was one of the *dava*'s knights?

Looking carefully at the horse, the idol fragment has rendered the eyes, mouth and nostrils. On the zoomorphic receptacle fragment this anatomical details are missing. In turn, for both items the ears have been modeled in the same technique (pulled with the fingers from the raw clay lump, not subsequently added). The idol's ears are pointed to the front, pricked up, showing an interested, incited animal... The ears of the other animal are turned to its back, rendering sadness, anger, anxiety, or fear.

Thus, the potter has managed to transpose into clay two diametrically opposite states. Yet, we could pose the question if the mentioned positions of the animals had anything to do with the symbolic meaning for the owner (owners) of those items. Compared analysis with other Thraco-Dacian cabaline representations has proofed that *Equus caballus* had been rendered in both ways. Pricked up ears have also the horses from **Popeşti** and **Bâzdâna**, those (some of them being winged) on the helmets from **Poiana Coţofeneşti**, **Băiceni** and **Agighiol**, those on *Cnemid no. 1* from the last mentioned site, the appliqués from **Băiceni**, **Craiova**, **Letnica**, **Lukovit**, **Vraca** – *Moghilanska* and **Duvanli** – *Goliama Moghila*, the plaques from **Polovragi** and **Letnica**, the *phalera* from **Surcea**, those on *Mug no*. *155* from **Rogozen**, the barrel-vessel made of burnt clay and rendering a knight riding a horse, as well as the paralelipipedic one from **Răcătău**, the *rythons* from **Popeşti** and **Piscu Crăsani**[72]. Ears turn to the back seem to be those of the horses on the *Mugs no*. *157* and *159* from **Rogozen**, the *phalera* from **Galiče**, the aplique from **Sveshtari**, the *kantharos* and "*burnt clay mold*" from **Răcătău**[73].

No rule could be established for the ears representation. Pricked up or turned to the back ears have been documented both for moving animals (in trot, or running) but also for those standing still. Some horses were afraid by the attack of some wild animals, others, on the contrary, were vigilant. Winged horses have been rendered both with pricked up ears and turned to their back, the last ones seeming brought in this position by the resistance of the air that *Pegasus* has filed through.

We have already mentioned several horses in the settlement from **Răcătău**. Among these, a special case is the image of a winged horse, identified upon a paralellipipedic recipient[74]. As already observed by specialists, it is clearly an influence of the Greek-Roman mythology. Only that the *Pegasus* from Răcătău has something more than other representations of this fantastic animal[75]; on his

[72] Conovici 1987, fig. 1-2, 4; Beldiman 1994, fig. 2/2; Sîrbu 1995, figs. 2/1a-b, 2a, 3a-d; Sîrbu, Florea 1997, figs. 4/1-2, 6/3, 8/1-2, 9/1, 10/1, 16/1, 17/1-5, 20/1, 22/3, 23/1-2, 49/5, 51/1, 53/1-2, 63/3, 64/1, 73/a-c, 74/2a, 80/1, 84/1; Sîrbu, Florea 2000a, figs. 3/1, 5/3-4, 9/1-211/3, 12/1, 14/2, 17/1-4, 18/1, 19/1, 23/1, 25/2-3, 30/1, 37/2, 42/1, 44/2, 52/1, 53/1-1a, 61, 62/2a, 64/2, 81/2, 82/1, 84/2 85/1-2, 86/187/1

[73] Sîrbu, Florea 1997, figs. 20/2-3, 22/1, 26/3, 63/4, 72/h; Sîrbu, Florea 2000a, figs. 19/2-3, 26/3, 60/g, 87/2, 90/1.

[74] Sîrbu, Florea 1997, 101, fig. 74/2a.

[75] Which looked like the winged horses on the *Mug no. 162* from

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forehead he has a very possible horn. Among the animals rendered by scratching on the limestone blocks of the paraments from a wall of the Dacian fortress from **Căpâlna**, seems to have appeared also the representation of a unicorn[76]. Therefore, "*the horned horse*" from **Radovanu** would not be unique in the Geto-Dacian art. It is true that, we don't know if our object was also a "*winged*" one. It is certain that this horse also, "*confirms the fact that the Dacian imaginary was populated by fabulous animals, similar to the medieval unicorn*"; but, as well emphasized, "*must keep the proper reluctancy to the similarities among the ancient symbols and medieval ones, not to mention that we cannot know for certain which were the real significances assigned by the Dacians to those fantastic creatures*"[77].

About sacrifices and animal ritual inhumations in the past few years have been publishes several studies by Valeriu Sîrbu and Gelu Florea[78]. Therefore, in 1993 Sîrbu has detected a series of sacrifice traces both in burials, but also in the settlements, or outside of them. Among the uncremated offerings discovered in the southern part of Romania, he mentioned the "*princely*" tumulus from **Agighiol**[79], with a chamber (that distinguished itself from the remainder assembly of stone and beams), inside which three horse skeletons have been identified, two of them bearing harness pieces, the head and legs of a horse in a burial from **Andolina**; harness pieces from minimum six horses in the tumulus destroyed at **Găvani**; the horse head in the "*princely*" burial from **Peretu**; the skeletons of those 14 horses of Oriental type discovered at **Zimnicea** (complete and fragmentary skeletons, all castrated or stallion males; most of them between 6-9 years[80]), some of them deposited with harness pieces[81]. It is significant that all these examples have belonged either to the 4th c. BC, or between the 4th-3rd c. BC.

Besides the unburned offerings found in funerary monuments, we should mention here also those in the pits, from the settlements, or even outside of them. At **Căscioarele**-*Coinea II* it was discovered a pit (noted as Pit *no. 1*), with rounded shape in the plan and trapezium-shaped in the profile, with a slightly curved base[82]. Inside it, besides the skeleton of a hare (*Lepus europaeus*), it was also found a horse skeleton (*Equus caballus*). "*The cadaver of the latter, complete and in anatomical connection, was placed close to the opening of the pit, set on its right side, with the head towards SSE and laid on its left scapula, as it didn't fit into the pit; the spine was slightly arched, rear legs in normal position, of walking, while for the front ones the right leg was bent from the knee and raised, while the left was almost stretched*"[83]. According to the zooarchaeological study, "*the deposited individual has been sacrificed at the age of 4 years and we are probably discussing about a male*", which, in the opinion of Mircea Udrescu and Elena Dobre[84], was part of the "group of "*regular*" horses*", relatively constantly found in the Geto-Dacian settlements*", having a stature of 132.5 cm.

Sîrbu, Ciocea and Damian desired to point out that "*we couldn't know if the pit has been especially dug for the cadaver deposition... or a disaffected storage pit has been reused. Also, we cannot establish for sure the cause of death: "natural death killed in battle or sacrificed at the death of his master. Regarding the hare, we believe that he was sacrificed on the occasion of the ritual made for the deposition of the horse*".

Together with the horse, there were also found the bridle, the horse bit and a buckle, all made of iron and entirely preserved[85]. These harness pieces, based on their analogies with similar items from **Zimnicea**, **Făcău**, **Găvani** and **Tolstaja Moghila**, enabled their finders to date the pit in the second half of the 4th c. BC, "*more probable towards the end of that century*"[86].

Also on the territory of the **Căscioarele** village, but on the spot "*Cătălui*", George Trohani has partly investigated a pit shaped as a bell (*Pit no. 2*) belonging to the 2nd c. BC, in which a horse skull has been identified[87]. Unfortunately, it is not known for certain if the complete animal or just the skull has been placed in there[88]. Also at **Vlădiceasca**, in the *Pit no. 3* dated in the 3rd c. BC have been identified parts of a fragmentary skull (facial massif) of a horse[89]. Its presence alone in an isolated

Rogozen, or on the helmet from Băiceni see Sîrbu, Florea 1997, figs. 4/2, 20/4.

[76] Glodariu, Moga 1989.

[77] Sîrbu, Florea 1997, 101.

[78] Sîrbu 1990; Sîrbu 1993; Sîrbu, Florea 1997; Sîrbu, Florea 2000a.

[79] Bolomey 1968.

[80] Haimovici 1971; Haimovici 1983.

[81] Alexandrescu 1983; Sîrbu 1993, 101 ff.

[82] Sîrbu, Ciocea, Damian 1992, 25 f., pl. I/1-2, III/1-2, V; Sîrbu 1993, 103, fig. 32, 60/1.

[83] Sîrbu, Ciocea, Damian 1992, 25.

[84] Udrescu, Dobre 1992, 30, Tab. 1.

[85] Sîrbu, Ciocea, Damian 1992, 25 f., pl. I/1, V.

[86] Sîrbu, Ciocea, Damian 1992, 25 f. with lit.

[87] Stoica 1984, 142.

[88] Sîrbu 1993, 104.

[89] Ionescu 1976, 144; Stoica 1984, 142.

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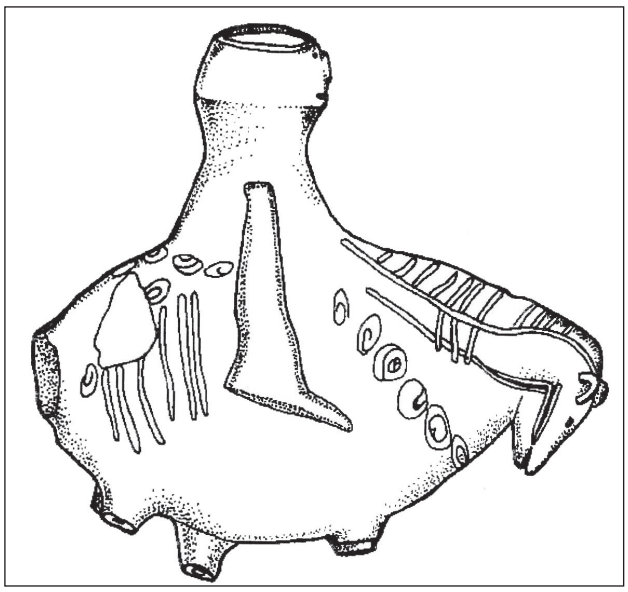

Fig. 23. Răcătău. Barrel-shaped vessel (after Căpitanu 1994a).

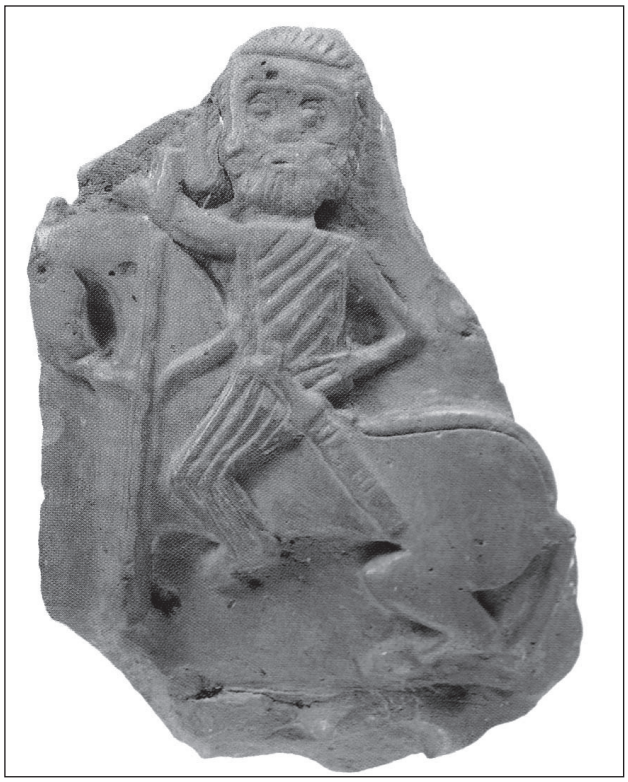

Fig. 24. Răcătău. Kantharos (after Căpitanu 1994a).

complex "*could be suggestive for a more special care given to this animal*"[90]. At **Zimnicea**, in a pit of the 2nd c. BC, two complete horse skeletons could be identified[91].

In the Dâmboviţa County, in the Getic settlement of the 2nd c. (second half)-1st c. BC, in the **Cătunu** village, have been found three complexes with horse osteological remains[92]. Therefore amongst the materials recovered from the *Surface dwelling no. IV*, bones of a horse head could be also identified[93]. The archaeozoological analysis has shown that they belonged to "*a horse aged at 7-8 years*"[94]. A truncated pit (noted as *Pit no. 19*) has contained the skeleton of a complete horse, flexed, with the stretched front legs and head orientated to the east[95]. His age was estimated to 8-9 years[96]. Another pit, situated towards the periphery of the settlement[97] has contained the head and extremities from two legs of an adult female individual, very probably aged at about 4 years[98]. The individuals from Cătunu have been included into the category of the Oriental horses[99]. In the opinion of Cornelia Stoica, « *L'enterrement de certains parties du squelette de cheval, sans autre objet de mobilier funéraire, pourrait représenter une continuation simplifiée d'un rituel funéraire plus ancien, à savoir le dépôt à côte du mort (inhumé ou incinéré) de certains parties des animaux sacrifies à l'occasion du banquet funèbre, ou bien des tombes symboliques ne renfermant pas les ou du mort. … nous estimons que la pratique des enterrements partiels de chevaux, sans autre mobilier funéraire…, ainsi que les tombes de chevaux au squelette entier…, pourraient représenter une influence de rituels funéraires pratiqués dans le milieu thrace, greffées sur des traditions locales géto-daces* »[100].

In the site from **Borduşani** – *Popină*, of the 2nd c. BC, in *Pit no. 91*, it was discovered "*a horse skull with the mandible situated upwards and a swine talus with polishing traces, placed close to its bottom, at the depth of 1,41 m… with a NV-SE orientation*"[101]. To the first half of the 1st c. BC has been also assigned the complex of about 15 sqm from **Conţeşti** – *Lacul lui Bârcă*[102], on which cremated horse, ovicaprines, suines and bovine remains have been discovered[103], together with iron objects, among which five spurs have been identified.

Unburned offerings of *Equus caballus* have been found not only in the perimeter of the settlements. A horse skull has been discovered in a pit from

[90] Ionescu 1976, 151.

[91] Stoica 1984, 142.

[92] Stoica 1980; Stoica 1984; Sîrbu 1993, 104. Other horses were discovered at Zimnicea necropolis (information Anca Ganciu).

[93] Stoica 1980, 195.

[94] Stoica 1980, 195.

[95] Stoica 1984, 138 f., fig. 2.

[96] Haimovici 1984, 145.

[97] Stoica 1984, 138, fig. 1.

[98] Haimovici 1984, 145.

[99] Haimovici 1984, 149.

[100] Stoica 1984, 143.

[101] Trohani 2005, 91 f., pl. 138.

[102] Vulpe, Popescu 1976; Sîrbu 1993, 106.

[103] Nicolăescu-Plopşor 1976.

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Bucureşti-*Bucureştii Noi*, while at **Vadu Săpat**, on the spot "*Budureasca 3*", in the ring-ditch of a tumulus, "*have been placed seven (?) horse heads, from which two with their muzzle towards the exterior, grouped on the northern side. The bones were either in anatomical connection, either represented just by the skull, mandible, or few cervical vertebrae. The horses skulls have been arranged either on the bottom of the pit or slightly above it*"[104]. If the pit from "*Bucureştii Noi*" has been dated in the 2nd c. BC, the complex from "*Budureasca 3*" has been assigned to the 5th-4th c. BC. An assembly that was similar to the last mentioned find has been investigated at **Gherăseni**[105], where horse skull has been placed in a circular ring-ditch.

The cabaline osteological remains have been discovered either in settlements or outside them, even beyond the "*borders*" of[106]: **Divici** (1st c. BC), **Dumbrava** (1st c. AD), **Poiana** (2nd c. BC-1st c. AD), **Someşeni** (1st c. BC-1st c. AD), **Şura Mică** (2nd-1st c. BC).

An interesting situation has been revealed by the faunal study of the remains from the fortified enclosure of the 1st c. AD from **Pietroasa Mică** – *Gruiu Dării*. In various complexes, besides other materials, horse bones have been identified (*Complexes 2*, *3*, *37*, *43*, *44*, *45*, *46*, *47*, *48*, *63*, *71*, *92*)[107]. In *Complex 45*, for instance, the osteological fragments have come from a juvenile and an adult, in *Complex 46* from an individual older than 15 months, in *Complex 63* from a sub adult individual. The percentage of *Equus caballus* in the total amount of domestic animals has reached 2.34%. According to the archaeozoologists, "*the material is very fragmented, the evident traces revealing the marrow being retrieved from the bones and this is why, we consider that it was consumed. Defleshing, or traces of fire could not be detected, fact which could suggest the boiling of meat pieces*"[108]. It is also interesting the conclusion that "*a surprising second place, regarding the meat that could be provided was occupied by the domestic horse, that doesn't mark itself out with too many remains, but is well represented by the minimal number of individuals*"[109].

Fig. 25. Răcătău. Clay mold (after Căpitanu 1994b)

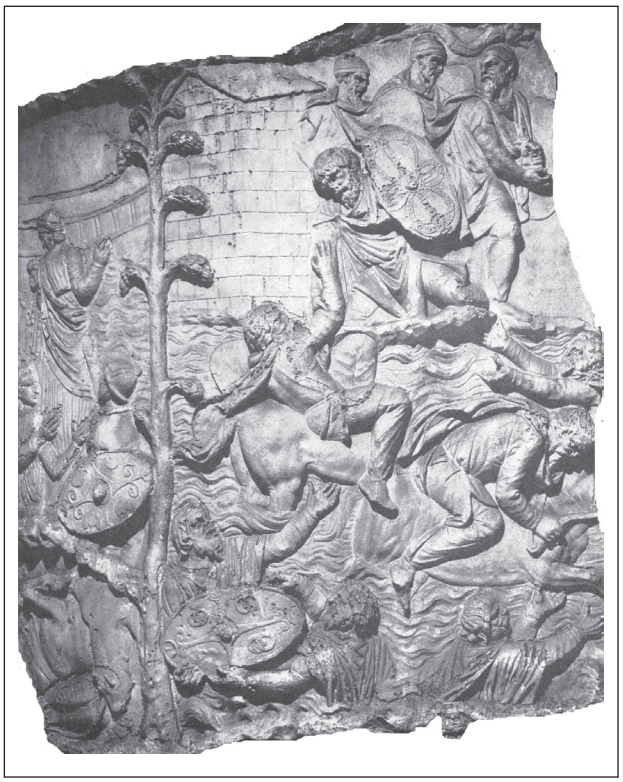

Fig. 26. Rome. Trajan Column, Scene no. XXXI (after Vulpe R. 1988).

Some Conclusions

In some of the antique written sources, it was pointed out the importance given by the Getae to their horses. Unfortunately, those writings are scarce[110]. Even so, the antique writers noticed,

[104] Sîrbu 1993, 105, fig. 33.

[105] Sîrbu 1993, 106.

[106] Stoica 1984, 142; Sîrbu 1993, 104 f.

[107] Stan, Bălăşescu 2005, 109 ff. About the *Equus caballus* from Pietroasele-*Gruiu Dării*, see also Bălăşescu 2001.

[108] Stan, Bălăşescu 2005, 116.

[109] Stan, Bălăşescu 2005, 117.

[110] Thucydides, II, 96, 1; Arrianus, *Anabasis*, I, 4, 4-5; Arrianus, *Cynegeticus*, 23, 2, 72; Dio Cassius, LI, 26, 1; Ovidius, V, 7,

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Fig. 27. Rome. Trajan Column, Scenes nos. CXLIII-CXLIV (after Vulpe R. 1988).

Fig. 28. Rome. Arch of Constantinus, Large freeze of Trajan (after Gramatopol 2011).

13-14; Dio Chrysostomos, XII, 19. See also Pippidi 1967, 183 ff.; Cotiugă, Alexianu 2001, 11, 20-21, 30, 78.

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that in Dacia, "*one could see everywhere swords, breast plates, spears and all places were full of horses, weapons and armed men*"[111].

On the other hand, it could be observed that also the "*cultual*" images of the "*Thracian knight*", prior to the Roman conquest, were in a relatively small number, both north and south of the Danube[112]. Few such representation of knights north of the mentioned river are, as we already mentioned before, those on the *Cnemid no. 1* (fig. 15) and helmet (fig. 16) from **Agighiol**, the *phalerae* from **Surcea** (fig. 17) and the plaques from **Polovragi** (fig. 18) and **Lupu** (figs. 19-20)**,** the Getic fragmentary cup with reliefed decoration (fig. 21), as well as on the *pythos* (fig. 22) from **Zimnicea**, the barrel vessel (fig. 23), the *kantharos* (fig. 24) and "*the burnt clay mold of the Thracian knight*" (fig. 25) from **Răcătău**[113].

Even if the written and iconographic information regarding the Getae and their horses is not very rich, it proofs that *Eqqus caballus* had played a significant role in the life of the Getic communities, both in their economic and religious domains. If in the economical activities it is obvious that the regular horse had been used, in turn, the elites had used, as stated above, the so-called "*elite horses*". These latter horses are to be found, most probably in the depictions rendered upon some items, like those from **Polovragi**, **Lupu**, **Surcea** or **Răcătău**. It is not excluded that riding personages, represented upon some objects could have been in fact "*the Thracian knight*" and the "*danubian*" one from the Roman Imperial time[114]. Daniel Spânu has recently draw the attention that the "*Falerae with male personages do not render simple riders... The shield, the spurs, the sword or the mantle, or maybe especially the horse representation, should not be perceived just as hints of the "warrior" character of the rendered personages, but mostly as references to the privileged social mythological status. From this reason, this armed, mounted characters, could be called, "knights" no matter their additional mythological significance which they possess.*"[115].

Despite the importance given by the Getae to the horses, images of horse riders belonging to this population are rare on the Roman monuments raised after the Daco-Roman wars. In the large majority of cases the warriors are rendered as pedestrians. Thus, on the *Trojan Column* we could mention, among others, the Scenes *XXIV*, *XXXII*, *LXXV*, *XCIII*, *CXXXV*[116].

Mounted Dacians are being rendered, in the opinion of some of the authors who have studied the Column, on the occasion of the invasion that occurred during the first Daco-Roman war of the Decebalus allies on the Lower Danube. Thus, in *Scene XXXI* knights could be noticed (Dacian and Sarmatian ones) trying to cross the Danube (fig. 26)[117]. Radu Vulpe had described this moment with the following words: "*In the front plan there were rendered several knights crossing the river. But this could be done in dramatic conditions. In the lower left corner, near the separation tree,* two *individuals that were partly sunken, step the water in despair, trying to keep themselves above it by using a shield that they cling to. One of them had raised a hand, asking for help. In front of them a third one, being in the same situation, had raised his both hands begging for being rescued. But no one could help them, because beyond them, two riders fight also with this trouble: one had fallen over the mane of the horse, who swam fearfully and could hardly be controlled, while the other, whose horse with the head lost into the waves goes into the deep, stretches his arm to the bank, where a comrade grabbed it and rescued him thus reaching to the dry land... More in front, in the middle, a rider could hardly make himself stay on the horse, with one hand keeping the bridle, while with the other he grasped the mane. Near the chest of the animal it could be seen fallen the wolf head of a Dacian flag*"[118]. In the opinion of Vulpe, the artist, who

[111] Appianus, 18, 1.

[112] Sanie 1995, 69.

[113] Crișan 1969, 209, fig. 115/1-2; Moscalu 1983, 93, pl. LXVII; Căpitanu 1969, 66, fig. 46-47; Căpitanu 1987, 72 ff., 78, fig. 1a-d, 2a/3; Căpitanu 1994a, 335 ff., fig. 1-2, 4; Căpitanu 1994b, 123 ff., fig. 1-2, 4-5, 8; Marinescu 1977, 30, fig. 8; Glodariu, Moga 1994, 36, 39, fig. 7-8, 18-19; Sanie 1995, 95, 97, pl. XXXII/1; Sîrbu, Florea 1997, 63, 67 and fig. 8, 16/1, 31/3, 73; Sîrbu, Florea 2000b; Sîrbu, Florea 2000c; Spânu 2006; Spânu 2012, 75, pl. 68, 136/1. Mioara Turcu (1979, 138) suggests that on another Getic "*Delian*" cup horses are being represented but, it is obvious, as considered by Silvia Marinescu-Bîlcu (1966, 115, fig. 1-2), that they are Billy goats.

[114] Spânu 2007, 68.

[115] Spânu 2012, 112.

[116] Daicoviciu, Daicoviciu 1968, pl. 12-13; Vulpe R. 1988, 53 ff., 75 f., 84 f., 88 ff., 128 ff., 132 ff., 178 ff., 199 ff., 218 f., and *Scene no. XXIV* on page 55, *Scene no. XXXII* on page 75, *Scene no. XXXVIII* on page 85, *Scene no. XL* on pages 89, 91-92, *Scene no. XLI* on page 93, *Scene no. LXIV* on page 129, *Scene no. LXVI* on page 133, *Scene no. LXX* on page 138, *Scene no. LXXI* on page 139, *Scene no. LXXII* on page 141, *Scene no. XCIII* on page 179, *Scene no. XCIV* on page 180, *Scenes nos. XCV-XCVI*, *Scenes nos. CXI-CXVI* on pages 199-204, *Scene no. CXXXIV* on page 219, *Scene no. CXXXVI* on page 221; Petolescu 1991, fig. 1, 4-5, 7; Petolescu 2010, 114 f., fig. 4/1, 5, 6/1.

[117] Daicoviciu, Daicoviciu 1968, pl. 17-18; Vulpe R. 1988, *Scene no. XXXI* on page 73.

[118] Vulpe R. 1988, 72.

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worked the respective scenes, desired to render those who had tried to cross the Danube riding, as being Dacians, as we see the clothing, the hair done and beard of the personages. The intention was also strengthened by the presence of the *draco* flag. It is only that, according to the mentioned specialist, the artist could have been mistaken, as in Moesia just the mounted Sarmatian detachments could have attended the fight, as the "*cavalry was a weapon by excellence belonging to the field Getae...As the Getae from Muntenia and Lower Moldova were now disarmed and dispersed, at the disposal of the Romans, it is mandatory to take into consideration just the Sarmatians*"[119]. Maybe also the lack of an own significant cavalry could have determined the king to make alliances with other barbarian populations, who could compensate this deficiency.

We think that the supposition of Radu Vulpe might be correct, the same as the assertion according which the Getae from the field excelled in taking the benefit of the military use of the horse. In fact, this could be also an explanation for the raids of the Gets south of the Danube, in most of the cases for plundering, purpose for which an efficient final imposed the presence of the cavalry[120]. We should not forget also that, without a very mobile cavalry, Burebista would have been unable to make his wars on such a wide spaces[121].

Seemingly, the mounted Dacians had played a rather minor role in the Daco-Roman wars, fact which is also suggested by the fact that on the Column, next to the *Scene XXXI*, appeared just one more image, with *Scenes nos. CXLIII-CXLIV*, upon which Dacian riders could be seen, amongst them being possibly the king Decebalus, on whose trail it could be seen the Roman cavalry (fig. 27)[122]. That still Dacian mounted detachments, made of noble people, had attended the fight, is a fact confirmed by the "*Large freeze of Trajan*" on the Arch of Constantinus from Rome, in which the Emperor could be seen when defeating the Dacians, where a *tarabostes* is also present, falling together with his horse (fig. 28)[123].

[119] Vulpe R. 1988, 74.

[120] Petolescu 1991; Petolescu 2010, 99 ff.

[121] Crişan 1977, 230 ff.; Petolescu 2010, 43 ff.

[122] Daicoviciu, Daicoviciu 1968, pl. 17-18; Vulpe R. 1988, 227 and *Scene no. CXLIII-CXLIV* on page 227; Petolescu 1991, 38, 89, fig. 8; Petolescu 2010, 115.

[123] Gramatopol 2011, fig. 58.

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BETRACHTUNGEN ZU DEN MIT *TRISKELION* VERZIERTEN GETISCHEN SCHALEN

CRISTIAN SCHUSTER, DONE ŞERBĂNESCU, ALEXANDRU S. MORINTZ

Schlüsselwörter: verzierte getische Schalen, *Triskelion/Triskeles*, Südrumänien.

Zusammenfassung: Die Forschungen in mehreren getischen Siedlungen aus dem Süden Rumäniens (hauptsächlich Muntenien), insbesondere in den *Dava*, führten zur Entdeckung von verzierten einheimischen Schalen, griechischer Nachahmungen. Einige dieser Schalen wurden mit *Triskelion/Triskeles* dekoriert. Die Schalen von Brăneşti, Popeşti – *Nucet* und Radovanu – *Gorgana a doua* sind sehr wahrscheinlich in demselben Gussmodell geformt worden.

Cuvinte cheie: cupe getice decorate, *triskelion/triskeles*, sudul României.

Rezumat: Investigaţiile din mai multe aşezări getice din sudul României (cu precădere din Muntenia), în special în *davae*, au permis descoperirea de cupe autohne decorate, imitaţii după cele greceşti. Unele dintre acestea, au fost ornamentate cu *triskelion/triskeles*. Cele identificate la Brăneşti, Popeşti – *Nucet* şi Radovanu – *Gorgana a doua* au fost realizate, foarte probabil, cu acelaşi tipar.

Zum Fund in Brăneşti

Die am Anfang des Jahres 2012 durchgeführten Rettungsgrabungen in Brăneşti, Bezirk Ilfov, führten uns zur Entdeckung getischer Spuren aus dem II.-I. Jh. v. Chr. (Abb. 1)[1]. Die geöffneten Grabungsschnitte bestätigten leider auch die bekannten Hinweise hinsichtlich starker Beeinträchtigungen, die in den 60.-70. Jahren des vorigen Jahrhunderts, naturbedingt und auf Grund des Einwirkens durch den Menschen (Erdverschiebungen), dieser Ansiedlung Schaden zugefügt haben. Infolgedessen wurden nur Keramikscherben, etwas seltener Reste von Lehmbewurf und Tierknochen und nur ein Bruchstück eines eisernen Pferdemundstückes gefunden.

Unter den Keramikscherben nimmt das Fragment einer verzierten Schale einen Sonderplatz ein (Abb. 2). Nach der Typologie von Irina Casan-Franga weist unsere Schale einen *Querschnitt der Kategorie 1b*, ein *Band der Kategorie 3*, ein *Blatt der Kategorie 9a* und ein *Triskelion der Kategorie 6c* (Abb. 3) auf und ist von achtstrahligen Sternchen umgeben[2]. Der Rand ist maximal 0,6 cm dick, die Schulterpartie 0,8 cm, an der maximalen „*Rundung*" des Gefäßes beträgt die Wandstärke 1 cm und am Unterteil 1,1 cm. Das Gefäß wurde aus Lehm mit kleinen Sandkörnchen, Keramikstückchen und Glimmer mittels einer tönernen Gussform und weiter auf der Drehscheibe geformt. Die Farbe weist eine schwarze Tönung auf.

Allgemeinheiten zu den verzierten getischen Schalen

Die getischen verzierten Schalen, einheimische Nachahmungen griechischer Tonware[3], beschäfti-

[1] Die Brăneşti – Vadu Anei-Zone wurde ab dem Jahr 1990 intensiveren archäologischen Forschungen unterzogen: Trohani 2000; Teodor 2000; Mănucu-Adameşteanu, Ciocănel, Nestorescu 2009; Măgureanu, Vintilă 2011.

[2] Casan-Franga 1967. Diese Typologie wurde auch von Vulpe, Gheorghiţă 1976 und Turcu 1976 und vielen anderen benutzt.

[3] Die meisten Fachleute verwenden für diese Gefäßgattung die Bezeichnung „*Delos-Schalen*". Andere sprechen von "*megarischen*" Schalen oder benützen beide Begriffe. Hier zu erwähnen sind Marinescu-Bîlcu 1966, 113; Crişan 1969, 137 ff.; Vulpe, Gheorghiţă 1976; Turcu 1976; Turcu 1979, 137 ff.; Conovici 1978; Comşa 1987; Ursachi 1995, 184; Vulpe R.,

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gen schon seit längerer Zeit die rumänischen Archäologen. Auf diese Gefäßform wurde in mehr oder weniger eingehenden Aufsätzen eingegangen, es wurden ihr aber auch spezielle Studien gewidmet[4]. Einen ersten Versuch unternahm im Jahr 1967 Irina Casan-Franga[5]. Mioara Turcu schrieb im Jahr 1976 über die Schalen, die im Geschichtsmuseum des Munizipiums Bukarest untergebracht waren, während Alexandru Vulpe und Marieta Gheorghiţă, im selben Jahr, auf die Schalen eingingen, die in der *Dava* und in der Nekropole von Popeşti gefunden wurden[6]. Die verzierten getischen Schalen lagen desgleichen im Interessensbereich der Fachleute Niculae Conovici, Maria Comşa, Cristina Popescu, Daniel Spânu und Valeriu Sîrbu[7].

Der zuletzt erwähnte Valeriu Sîrbu stellt fest[8], dass über 85 %, der auf dem Gebiet Rumäniens entdeckten Schalen dieser Art in muntenischen Ortschaften zu finden sind. Unter diesen Fundorten sind Bucureşti, la *Ziduri între vii*, *Dămăroaia*, *Căţelu Nou*, *Mihai Vodă*, *Fundeni*, *Dudeşti*, *Tei*, *Bucureştii Noi*[9], Pantelimon[10], Snagov[11], Tânganu[12], Bragadiru[13], Popeşti (Schalen und Gussformen)[14], Mironeşti – *Malul Roşu*[15], Radovanu – *Gorgana a doua* (Schalen und Gussformen)[16], Căscioarele – *Cătălui* und *Ostrovel*[17], Chirnogi[18], Sultana[19], Valea Argovei, Vasilaţi[20], Vlădiceasca[21], Piscul Crăsani (Schalen und Gussformen)[22], Cucuieţi –Moară[23], Brăniştari[24], Giurgiu – *Malu Roşu*[25], Cătunu[26], Cetăţenii din Vale[27], Alexandria – *S.U.T.* – *Simca*[28], Poroschia – *Râpe*[29], Zimnicea (Schalen und Gussform)[30], Sprâncenata[31], Gura Vitioarei[32], Pietroasele – *Gruiu Dării*[33], Borduşani – *Popină*[34], Grădiştea[35] u.a. zu nennen.

In seinem vor kurzem erschienenen Aufsatz unterteilt Valeriu Sîrbu[36] die Schalen gemäß ihrer Verzierung in mehrere Kategorien: „*a) motifs géométriques, b) motifs végétaux, c) motifs zoomorphes, d) motifs anthropomorphes, e) monnaies, f) motifs divers - vases, éperons, cornupia*". Die Schale aus Brăneşti enthält sowohl geometrische als auch pflanzliche Dekorformen. Für uns

Teodor 2003, 83; Spânu 2006; Sîrbu 2009; Sîrbu 2010. Eine dritte Gruppe von Archäologen diskutiert diese Gefäßkategorie als „*Schale mit Reliefverzierungen*": Popescu 2000. Preda 1981, 57 und 59 spricht von „*schalenförmigen Gefäßen*", aber auch „*megarischen Schalen*". Hinsichtlich der griechischen Originalgefäße, bekannt unter dem Namen *ἡμιτομος*, siehe u.a. Bucovală 1967, 39 ff.; Casan-Franga 1967, 9 f.; Ocheşanu 1969, 209-211 mit älterer Literatur.

[4] Andrieşescu 1924; Pârvan 1926; Vulpe 1965; Casan-Franga 1967; Turcu 1976; Vulpe, Gheorghiţă 1976; Comşa 2006; Sîrbu 2009.

[5] Casan-Franga 1967.

[6] Vulpe, Gheorghiţă 1976; Turcu 1976.

[7] Conovici 1978; Comşa 1987; Comşa 1988; Popescu 2000; Spânu 2006; Sîrbu 2009.

[8] Sîrbu 2010, 20.

[9] Rosetti 1935, 63, Abb. 28; Leahu 1965, 62, Abb. 44/1-4; Casan-Franga 1967, 19 mit Literatur; Turcu 1976, 202, 204, Taf. 10/7, 10, 14-15, 17, 11/7, 12/10; Comşa 1987, Abb. 2/3, 4/3, 9/1.

[10] Bichir 1959, 820, Abb. 3/1-2.

[11] Rosetti 1935, 19, Abb. 23-24; Turcu 1976, 202, Taf. 7/6; Vulpe, Gheorghiţă 1976, 179; Comşa 1987, Abb. 9/6; Sîrbu, Florea 1997, Abb. 66/1.

[12] Turcu 1965, 274, Abb. 32; Vulpe, Gheorghiţă 1976, 179; Comşa 1987, Abb. 10/4.

[13] Turcu 1971, 59, Abb. 3/5-8; Turcu 1976, 202, 204, Abb. 10/12, 16, 18, 11/1-4.

[14] Vulpe R. 1955, 249, Abb. 14/1-2, 15/3-8; Vulpe R. 1957, 236 f., Abb. 12, 13/3, 14/1-4; Vulpe R 1959a, 342, Abb. 9/1-3; Vulpe 1959b, 313, Abb. 10/1-6; Vulpe R 1960, 331, 335, Abb. 7/6; Vulpe R. 1962, 459, Abb. 2; Casan-Franga 1967, Abb. 5/1-2, 4, 9/1-5 10/1-4; Vulpe, Gheorghiţă 1981, Taf. II/1-3; Comşa 1987, Abb. 2/1-2, 5-7, 3/1, 3-9, 4/1, 4-7, 5/3-5, 6/1-6, 7/1-3, 5-6, 8/1-2, 411/1-2, 12/1-813/1-7, 14/1-5, 15/1-2, 5-6; Trohani 1997, 214, Taf. XLIII/1-11, XLIV/1-9, XLV/1-5; Palincaş 1997, 184, Taf. 5/5; Sîrbu, Florea 1997, Abb. 67/3-4.

[15] Schuster, Popa 2008, 40, Abb. 66.

[16] Vulpe, Gheorghiţă 1976, 179; Şerbănescu 1985, 25, Abb. 3/6.

[17] Marinescu-Bîlcu 1966, 114 f., Abb. 1-2; Vulpe, Gheorghiţă 1976, 178; Comşa 1987, Abb. 11/3; Sîrbu, Damian 1996, 38, Abb. 60/15; Sîrbu, Florea 1997, Abb. 67/1-2; Sîrbu 2009, 21, Abb. 4/2-3.

[18] Casan-Franga 1967, 19; Trohani 1975, 140, Abb. 13/1; Vulpe, Gheorghiţă 1976, 177.

[19] Mitrea 1960, 538, Abb. 6; Casan-Franga 1967, 19; Vulpe, Gheorghiţă 1976, 179.

[20] Vulpe, Gheorghiţă 1976, 178.

[21] Trohani 1975, 163, Abb. 19-20; Trohani 1976, 115, 123, 128, Abb. 22/1-6, 23/1-3; Vulpe, Gheorghiţă 1976, 179; Comşa 1987, Abb. 8/3, 10/3, 14/6.

[22] Andrieşescu 1924, Abb. 208-209, 215; Pârvan 1926, Abb. 163-164, 170; Casan-Franga 1967, 19, Abb. 5/3, 6, 12/5; Conovici 1978; Conovici, Neagu 1983, 195, Abb. 5/7; Sîrbu, Florea 1997, Abb. 67/6.

[23] Vulpe, Gheorghiţă 1976, 178.

[24] Semo 1966, 449; Vulpe, Gheorghiţă 1976, 177.

[25] Păunescu, Ionescu, Rădulescu 1962, Abb. 4/1; Casan-Franga 1967, Abb. 12/6; Vulpe, Gheorghiţă 1976, 178; Comşa 1987, Abb. 9/2.

[26] Boruga-Stoica 1972, 133 f., Abb. 5/2-5; Vulpe, Gheorghiţă 1976, 177; Stoica 1979, 122, Abb. 6.

[27] Rosetti 1962, 86, Abb. 6/4, 7/1; Vulpe, Gheorghiţă 1976, 177 f.

[28] Mirea, Pătraşcu 2006, 41, Abb. 38/6.

[29] *Ibidem*, 42, Abb. 39/1-4.

[30] Casan-Franga 1967, Abb. 5/5, 7/1-3, 8/1-8, 11/1-4; Vulpe, Gheorghiţă 1976, 179; Comşa 1987, Abb. 3/2, 9/3-4, 10/1, 15/3-4; Spânu 2006.

[31] Preda, Butoi 1979, 117; Preda 1981, 59 f., 94 f., Abb. 38-40; Comşa 1987, Abb. 4/2, 5/1-2, 6, 7/410/2; Sîrbu, Florea 1997, Abb. 67/5.

[32] Vulpe, Gheorghiţă 1976, 178 f.

[33] Casan-Franga 1967, 19; Vulpe, Gheorghiţă 1976, 179.

[34] Trohani 2006, 66.

[35] Sîrbu 1996, 25, 81 f. mit Literatur, Abb. 88/1-8, 89, 90/1-6.

[36] Sîrbu 2009, 21.

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Brăneşti
© 2013 Google
Image © 2014 DigitalGlobe
Google earth
2004
Imagery Date: 10/31/2012 44°26'41.32" N 26°19'57.84" E elev 191 ft eye alt 4005 ft

Abb. 1. Brăneşti. Satellitenbild (Google Earth 2013).

ist insbesondere das *Triskelion* wichtig. Während in der Literatur andere Archäologen zum Beispiel den menschlichen Gestalten oder der Sonnenverzierung ihre Aufmerksamkeit schenkten[37], behandeln wir in diesem Beitrag die Schalen, die mit einem Ornament versehen sind, das in die Fachliteratur unter seinem griechischen Namen *Triskelion* (*τρισκέλιον*)/ *Triskeles* (*τρισκελής*) eingegangen ist. Dieses zusammengesetzte Substantiv besteht aus den Wörtern *τρι* = dreifach und *σκέλος* = Fuß.

Zu den mit *Triskelion/Triskeles* verzierten Schalen

Das östlich von Bukarest gelegene Brăneşti ist nicht der einzige Ort mit getischen Hinterlassenschaften, an dem mit *Triskeles* verzierte Schalen gefunden wurden. Aus Vadu Anei, einem Dorf, das zur Gemeinde Brăneşti gehört und ebenfalls am linken Ufer des Baches Pasărea liegt, wurden in einer Siedlung mit getischer Keramik aus dem IV.-III. und II.-I. Jh. v. Chr.[38] weitere lokale Nachahmungen griechischer Schalen entdeckt. Ihr Anteil – 11 Fragmente[39] – an der Gesamtkeramik der Siedlung beträgt 0,10 %. Unter ihnen nimmt eine Keramikscherbe eine Sonderstellung ein. Es handelt sich um ein Fragment verziert mit einem einfachen Band (des *Typs 1* nach Casan-Franga), mit einem Blatt (des *Typs 9a*) und Sternchen, die um dieses Blatt herum angeordnet sind (Abb. 4)[40]. Auch wenn weitere Ornamente fehlen, sind wir der Meinung, dass auch dieses Gefäß mit hoher Wahrscheinlichkeit, genauso wie der Fund in Brăneşti, den Schalen mit Triskeles zuzuordnen ist.

Ein größeres Fragment einer Schale, entdeckt in der *Dava* von Popeşti, sekundär gebrannt, hat einen Querschnitt der *Kategorie 2* und ist verziert mit einem *Band der Kategorie 1*, einem *Blatt der Kategorie 9a* und *Triskeles der Kategorie 6c* (Abb. 5)[41]. Die verwendete Tonmischung ist guter Qualität, ohne Verunreinigungen. Diese Schale ist der aus Brăneşti sehr ähnlich und wirf die Frage auf, ob sie nicht in ein und derselben Gussform oder einer der gleichen Reihe angefertigt wurden.

Während bei diesem Beispiel die spiralförmig Enden der Haken des *Triskelions* nach rechts gewunden sind, biegen sich an einem zweiten anderen, im Jahr 1955 aufgefundenen Fragment[42] die Hakenenden nach links (*Querschnitt 5b*, *Band 1*, *„folioles imbriquées" 1a*, *Perlen 2a*, *Spiralen* und *Triskelion 6b & c*, *Medaillon 3*) (Abb. 6). Derselbe *Querschnitt 5a*, nun aber begleitet von einem *Band*

[37] Vulpe 1966; Comşa 1987; Comşa 2006; Spânu 2006.

[38] Trohani 2000.

[39] Trohani 2000, 402, Abb. 21/1-5.

[40] Trohani 2000, Abb. 21/2.

[41] Casan-Franga 1967, 25, Abb. 10/2; Turcu 1976, 202, Abb. 13/5.

[42] Vulpe R. 1957, Abb. 12; Vulpe, Gheorghiţă 1976, 187, Taf. 8/1.

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Abb. 2. Brăneşti. Fragment einer mit *Triskelion* verzierten Schale (Foto Gh. Chelmec).

Abb. 3. Brăneşti. Detail mit dem *Triskelion* (Foto Gh. Chelmec).

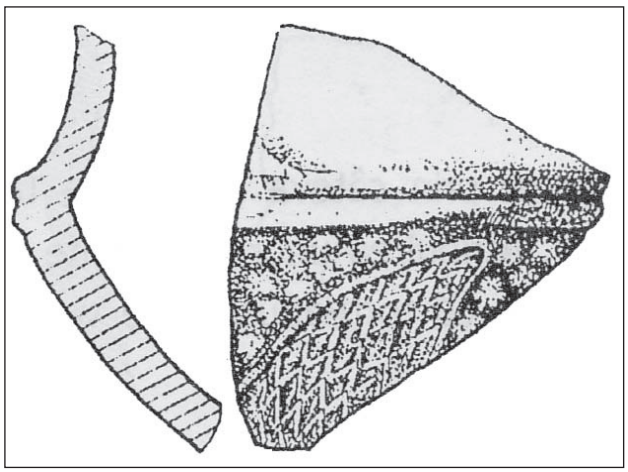

Abb. 4. Vadu Anei. Fragment einer verzierten Schale (nach Trohani 2000).

2a, *Perlen 2a*, *Palmetten 11a*, Spiralen, *Triskeles 6b & c* und einem *Medaillon 5* ist auf einer anderen ebenfalls 1954 aufgefundenen Schale (Abb. 7)[43] zu sehen. Ein *Triskelion* (*Kategorie 6c*) mit asymmetrischen Speichen, einem *Band 3*, *Perlen 2a* und *Palmetten 11c* ist auf einer ebenfalls 1954 entdeckten Schale mit einem *Querschnitt 5a* (Abb. 8)[44] zu erkennen. Es muss auf ein anderes Schalenfragment hingewiesen werden, dessen genauen Fundplatz wir in Popeşti zwar nicht kennen, das möglicherweise desgleichen mit einem *Triskelion*[45] verziert war. Im *Grabhügel Nr. 2* der Nekropole bei Popeşti fand man mehrere kleine Bruchstücke[46], darunter sehr wahrscheinlich auch einige Teile von Schalen mit *Triskeles 6c* und *Blatt 9a*[47].

Nicht auszuschließen ist, dass ein *Triskelion* auch auf einem Fragment von Piscu Crăsani[48] seinen Platz hat. Andererseits aber kann die Hypothese, dass anstatt von *Triskeles*, die Schale mit mehrarmigen spiralförmigen Windmühlenräder verziert war, nicht ausgeschlossen werden.

Ein desgleichen interessantes Fragment einer mit *Triskelion* verzierten Schale stammt aus der *Dava* bei Radovanu – *Gorgana a doua* (Abb. 9). Vergleicht man diese Schale (mit einem *Querschnitt 1b*, *Band 3*, *Blatt 9a* und *Triskelion 6c,* umgeben von achtstrahligen Sternchen) mit denjenigen aus Brăneşti und Popeşti – *Nucet*, kommt man zur Schlussfolgerung, dass die Gefäße in derselben oder in einer sehr ähnlichen Gussform angefertigt wurden. Die Farbe des Gefäßes ist grau, während die Tonmischung eine sehr guter Qualität aufweist.

Die von uns angesprochene Dekorform wurde auch in der Verzierung des Unterteils der Schalen verwendet (nach A. Vulpe und Marieta Gheorghiţă handelt es sich um „*médaillon à motifs géométriques*")[49]. Diese Dekorform ist wahrscheinlich auch auf dem Medaillon eines Gefäßes (Abb. 10) eingeprägt, das im *Niveau Lt II5* des *Schnittes Π* zum Vorschein kam[50]. Das Medaillon einer anderen Schale aus Popeşti, trägt ein *Triskelion* und drei Knubben (Abb. 11)[51].

[43] Vulpe, Gheorghiţă 1976, 187, Taf. 5/5.

[44] Vulpe R 1955, 252, Abb. 15/5; Vulpe, Gheorghiţă 1976, 186, Taf. 5/3.

[45] Turcu 1976, 202, Taf. 8/6.

[46] Vulpe 1976, Taf. 8/1-7.

[47] Vulpe, Gheorghiţă 1976, 187, Taf. 15/12-16; Vulpe 1976, Taf. 8/2-6.

[48] Conovici 1978, 168, Abb. 7/2.

[49] Vulpe, Gheorghiţă 1976, 175.

[50] Trohani 1997, Taf. XLV/1.

[51] Turcu 1976, 200, Taf. 1/1-1a.

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Ein weiteres Beispiel begegnet uns auf einer Schale aus Bucureşti – *Fundeni* mit demselben Ornament, die Knubben sind aber durch je zwei Linien abgegrenzt, die einen Winkel von ungefähr 60° bilden und mit der Spitze gegen die Gefäßmitte weisen (Abb. 12)[52]. Interessant ist auch das Medaillon einer Schale aus Cândeşti, bei dem, unserer Meinung nach, das klassische *Triskelion*[53] durch spiralartige „*Stengel*" ersetzt wurde.

Zu den verzierten Schalen mit mehrarmigen Windmühlenrädern

Auf anderen Schalen, anstatt eines *Triskelion*, sind mehrarmigen Windmühlenräder zu sehen. Eine Schale mit einem *Tetraskelion* wurde in der *Dava* von Popeşti – *Nucet* gefunden; das gilt auch für die Schale von Sprâncenata (Abb. 13)[54]. Das Medaillon einer Schale von Bucureşti – *Ziduri între vii* zeigt desgleichen ein *Tetraskelion* (Abb. 14)[55]. Das ist auch bei einer andere Schalen aus Popeşti der Fall, bei der aber die Speichen nicht aus einem Zentralpunkt (aus einem Knopf, Stern, Blume u.a.), sondern aus vier verschiedenen Knöpfen herauswachsen (Abb. 15)[56].

Ein Bruchstück einer Schale aus Grădiştea, verziert mit einer waagerechten Linie und Knubben, zeigt nach Valeriu Sîrbu in ihrem Oberteil als Dekor eine Spiralform[57]. Betrachtet man die Position der „*Spirale*" kann unseres Erachtens nach nicht ausgeschlossen werden, dass diese eigentlich zu einem mehrspeichigen Windmühlenrad gehört, das sehr ähnlich dem der Schale von Popeşti ist.

In Giurgiu – *Malu Roşu* (Abb. 16)[58] wurde eine Schale mit einem Medallion mit fünf (*Pentaskelion*), in Vlădicească (Abb. 17) eine mit sieben Speichen entdeckt. Zu den Schalen mit Windmühlen rädern könnte auch ein Fragment in Piscu Crăsani gehören, das bei Ausgrabungen gefunden wurde[59].

Einige Erwägungen

Es ist allgemein bekannt, dass die getischen verzierten Schalen einheimische Nachahmungen

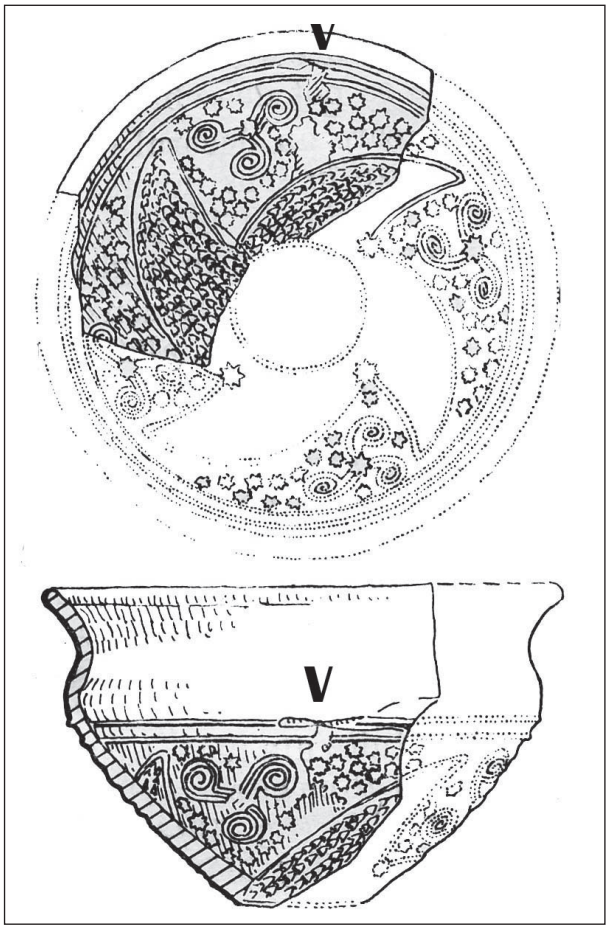

Abb. 5. Popeşti – *Nucet*. Fragment einer mit *Triskelion* verzierten Schale (nach Casan-Franga 1967).

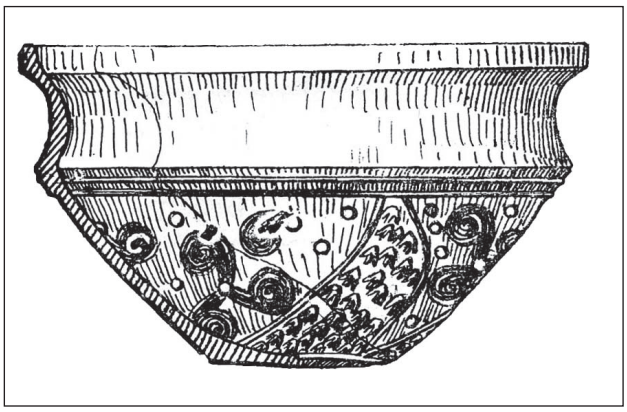

Abb. 6. Popeşti – *Nucet*. Fragment einer mit *Triskelion* verzierten Schale (nach Vulpe, Gheorghiţă 1976).

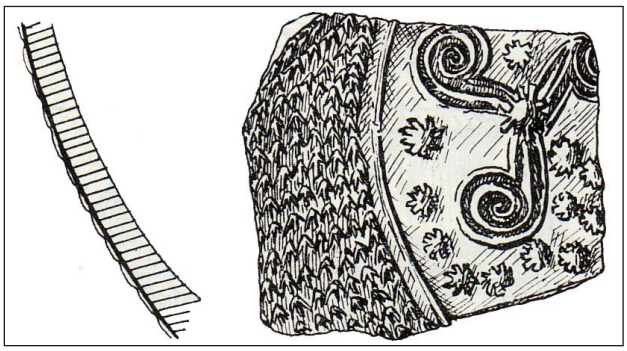

Abb. 7. Popeşti – *Nucet*. Fragment einer mit *Triskelion* verzierten Schale (nach Vulpe, Gheorghiţă 1976).

[52] Dumitrescu 1934, 121; Turcu 1976, 202, Abb. 11/7.

[53] Bobi 1999, 148, Taf. LXXXV/1.

[54] Preda 1981, 57, Taf. XXXVIII, XXXIX/2; Sîrbu, Florea 1997, Abb. 67/5.

[55] Rosetti 1935, 59, Abb. 13; Rosetti 1959, Taf. 28/3; Morintz, Rosetti 1959, Taf. XXVII/3; Turcu 1976, 202, Abb. 13/6; Comşa 1987, 85, Abb. 9/1.

[56] Vulpe, Gheorghiţă 1976, 183, Taf. 9/7.

[57] Sîrbu 1996, 81, Abb. 88/4, 90/5.

[58] Păunescu, Ionescu, Rădulescu 1962, 134, Abb. 4/1; Comşa 1987, 85, Abb. 9/2.

[59] Conovici 1978, 168, Abb. 5/8.

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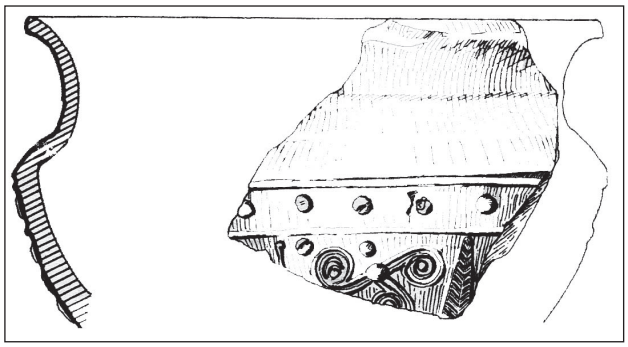

Abb. 8. Popeşti – *Nucet*. Fragment einer mit *Triskelion* verzierten Schale (nach Vulpe, Gheorghiţă 1976).

Abb. 9. Radovanu – *Gorgana a doua*. Fragment einer mit *Triskelion* verzierten Schale (Foto Gh. Chelmec).

Abb. 10. Popeşti – *Nucet*. Medallion einer Schale verziert mit einem *Triskelion* (nach Trohani 1997).

griechischer Gefäße (aus Delos oder Megara) sind[60]. Sie wurden hauptsächlich in den wichtigen Siedlungen, den *Dava*, produziert. Wir nennen hier nur die Funde aus Muntenien, die dafür sprechen, sie stammen aus Popeşti – *Nucet*, Radovanu – *Gorgana a doua* und Piscu Crăsani, Zimnicea[61]. Ausnahmen stellen die unbefestigten Siedlungen von Bragadiru[62] und Mihai Bravu[63] dar.

Der jetzige Stand der Forschung scheint auf Popeşti – *Nucet* als Hauptherstellungsort der verzierten Schalen in Muntenien zu deuten. Dies beweist die beträchtliche Anzahl vollständiger Schalen und auch Bruchstücke davon, die hier gefunden wurden. Nicht zu vergessen sind auch die Gussmodelle, die an das Tageslicht gekommen sind.

In der *Dava* bei Popeşti wurde bis heute kein Gussmodell entdeckt, das ein *Triskelion* oder *Triskeles* zum Ornament hat. Eine solche Dekorform kann aber auf einer Gussform aus der befestigten Siedlung von Radovanu – *Gorgana a doua*[64] beobachtet werden. Es muss aber gesagt werden, dass diese Gussform zur Herstellung von kalottenartigen Schalen benutzt wurde. Zu den *Triskeles* gesellen sich einfache Spiralen (Schneckengehäuse), Rosetten und Palmenblätter (Abb. 18).

Berücksichtigt man, dass der Töpfer aus Radovanu eine Vorliebe auch für *Triskeles* zeigt, bezeugt durch ein Schalenfragment mit dieser Dekorform, das identisch (fast?) mit demjenigen aus Brăneşti ist, kann die Möglichkeit, dass beide Gefäße in Radovanu hergestellt bzw. gegossen wurden, nicht ausgeschlossen werden. Vielleicht wurden die verzierten Schalen aus Radovanu als Tauschware für andere getische Gemeinschaften verwendet oder von diesen käuflich erworben. Anderseits ist nicht zu vergessen, dass auch in Popeşti – *Nucet* ein Schalenfragment welches gleich denen in Brăneşti und Radovanu – *Gorgana a doua* verziert wurde, entdeckt worden ist (Abb. 19). Vergleicht man die beiden Fragmente aus Popeşti und Radovanu, so ist festzustellen, dass diese denselben Gussdefekt aufweisen (Abb. 5 und 9 - markiert mit je einem Pfeil). Daher ist schwer zu urteilen, ob die Schalen in Radovanu oder Popeşti

[60] Babeş 2001, 751, ist der Meinung, dass die „*Nachahmung meistens frei, schöpferisch*", mit „*einer originellen, überaus vielfältigen Ornamentik*", ist.

[61] Casan-Franga 1967, Abb. 5/1-2, 4; Vulpe, Gheorghiţă 1976, 183 ff., Taf. 11/1-6; Turcu 1976, 201 f., Taf. 9/6, 12/1-2; Conovici 1978, 176 ff. mit älterer Literatur; Şerbănescu 1985, 25, Abb. 3/6; Şerbănescu 1998, Abb. 78/8; Trohani 1997, Taf. XLIII/1.

[62] Turcu 1979, 138, Anm. 247.

[63] Enăchiuc-Mihai 1978, 65. Ihre Ausführungen lassen einige Fragen offen.

[64] Şerbănescu 1985, Abb. 3/6.

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gegossen wurden. Nicht auszuschließen ist, dass es wandernde spezialisierte Töpfer gab, die von Siedlung zu Siedlung zogen und an Ort und Stelle diese Kategorie von Gefäßen anfertigten[65].

1969 vertrat Ion Horaţiu Crişan die Meinung, dass die verzierten Schalen als Luxusware anzusehen sind[66]. Heute kann seine Hypothese nicht mehr akzeptiert werden, da in letzter Zeit in zahlreichen Siedlungen Gefäße dieser Gattung zum Vorschein kamen, und zwar hauptsächlich in Südrumänien (Muntenien, Oltenien, Dobrogea), aber auch, weniger zahlreich, in Siebenbürgen und in der Moldau.

Interessante Feststellungen hinsichtlich von Tausch und Handel zwischen den verschiedenen getischen Siedlungen machte Niculae Conovici in einem Aufsatz aus dem Jahr 1978. So sind u.a. die Handelsbeziehungen zwischen den *Dava* Popeşti und Piscu Crăsani erforscht worden. Die Anzahl der Schalen, die in Popeşti produziert und in Piscu Crăsani entdeckt wurden, ist viel größer, als jene die umgekehrt in Piscu Crăsani gefertigt und in Popeşti gefunden wurden[67].

Betrachtet man die Verbreitung der Schalen auf dem Gebiet Munteniens (Popeşti, Radovanu, Piscu Crăsani, Brăneşti, Vadu Anei, Grădiştea und andere Fundorte) muss betont werden, dass der Handel nicht nur auf wirtschaftliche Beziehungen hindeutet, sondern ein viel komplizierteres Netz von politischen, administrativen, religiösen Verbindungen aufzeigt. Den meisten Produktionszentren von verzierten Schalen kam sehr wahrscheinlich nicht nur eine ökonomische Rolle zu, sie waren auch Sitz politischer und religiöser Macht ihnen des umgebenen Gebietes.

Dass der Handel mit verzierten Schalen die Grenzen Munteniens und den Süden der Moldau überschritt[68], ist u.a. durch Funde (19 verzierte fragmentarische Schalen) in der dakischen Siedlung von Sighişoara – *Wietenberg*[69] belegt. Aurel Rustoiu ist der Meinung, dass ein Teil von ihnen südliche Importware darstellt, andererseits kann aber auch eine einheimische Produktion nicht ausgeschlossen werden[70].

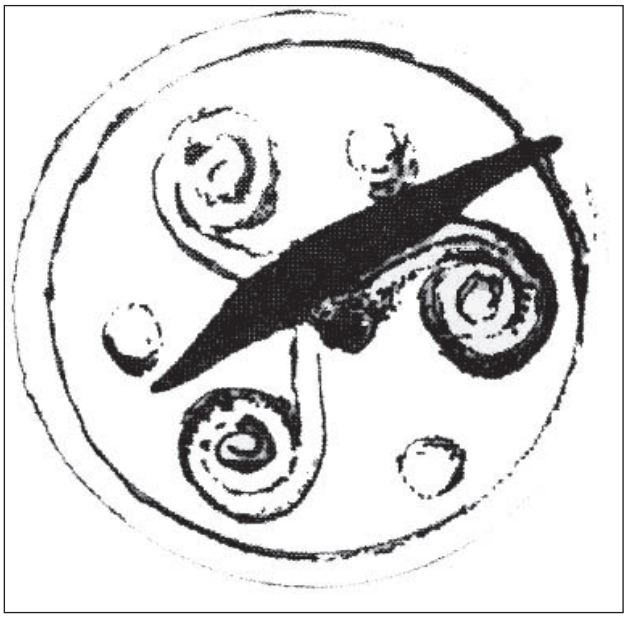

Abb. 11. Popeşti – *Nucet*. Medallion einer Schale verziert mit einem *Triskelion* (nach Turcu 1976).

Abb. 12. Bucureşti – *Fundeni*. Medallion einer Schale verziert mit einem *Triskelion* (nach Turcu 1976).

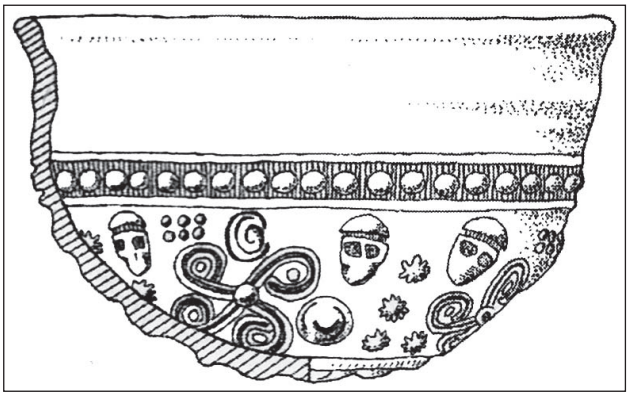

Abb. 13. Sprâncenata. Fragment einer mit *Tetraskelion* verzierten Schale (nach Preda 1986).

[65] Popescu 2000, 244 glaubt nicht an die Existenz spezialisierter Töpfereien, die verzierte Schalen produziert haben.

[66] Crişan 1969, 139 f.

[67] Conovici 1978, 180.

[68] Vulpe R., Teodor 2003, 83 unterstreichen, dass die verzierten Schalen zahlenmäßig „*geringer in der ostkarpatischen Zone zu finden sind, das obwohl andere Luxusgefäße oft entdeckt wurden*".

[69] Rustoiu 1997, 89, Abb. 101-102.

[70] Rustoiu 1997, 89.

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Abb. 14. Bucureşti – *Ziduri între vii.* Medallion einer Schale verziert mit einem *Tetraskelion* (nach Morintz, Rosetti 1959).

Abb. 15. Popeşti – *Nucet*. Medallion einer Schale verziert mit einem *Tetraskelion* (nach Vulpe, Gheorghiţă 1976).

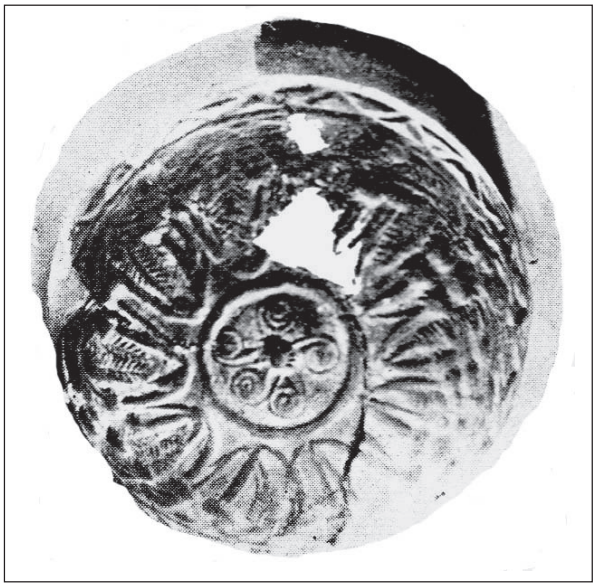

Abb. 16. Giurgiu – *Malu Roşu*. Medallion einer Schale verziert mit einem *Pentaskelion* (Comşa 1987).

Es bestanden nicht nur Handelsbeziehungen zwischen Muntenien und Siebenbürgen, sondern auch zwischen der Großen Walachei und Oltenien. Belege diesbezüglich sind die Schalen von Ocniţa[71], die sowohl in der unbefestigten Siedlung als auch in der *Dava* gefunden wurden, und Polovragi[72]. Ein Teil der Schalen zeigt Verbindungen mit den Töpfereien aus Zentralmuntenien, mit Popeşti und Radovanu. Dumitru Berciu unterstreicht aber, dass man auch von einer lokalen Produktion sprechen muss[73].

Das *Triskelion* ist sehr wahrscheinlich eine Verzierung, die den griechischen oder keltischen Dekorrepertoires entnommen wurde[74], die aber auch auf einheimische/lokale Wurzeln/Vorgänger blühte. Auf dem Gebiet des heutigen Rumäniens ist dem Verzierungsrepertoire der Keramik schon seit langem dieses Ornament eigen. *Triskeles* oder triskelionähnliche Verzierungen, aber auch solche mit mehreren Speichen, konnten schon auf den äneolithischen, bronze- und hallstattatzeitlichen Gefäßen aber auch anderen Objekten entdeckt werden[75].

Es stellt sich die Frage, welchen symbolischen Wert die *Triskeles* beinhalteten. Einige der Archäologen sind der Meinung, dass hinsichtlich dieser Dekorform in der Vorgeschichte von einem Sonnenkultus gesprochen werden muss[76]. Das wäre, gemäß Maria Comşa[77], auch für die getische Symbolistik gültig. Anderseits, da das *Triskelion* den dreifachen Fuß darstellt, ist auch an das Schreiten, an die Bewegung zu denken[78]. Das würde bedeuten, dass die Sonne (eine „*Person*" mit „*menschlichen*" Eigenschaften?) mit ihren Strahlen (Füßen) am Himmel

[71] Berciu 1981, 54 ff.; Berciu, Iosifaru, Purice, Gherghe 1988, 176, Abb. 2/7; Berciu, Iosifaru, Purice 1990, 135; Popescu 2000, 244.

[72] Marinescu 1977, 30 ff.

[73] Berciu 1981, 56.

[74] Sîrbu, Florea 1997, 49.

[75] Hier nennen wir z.B. die Ornamentik mit *Triskeles*, *Tetraskeles*, *Pentaskeles* oder mehrarmige Windmühlenräder der äneolithischen Gumelniţa-Kultur (Voinea 2005), den bronzezeitlichen Gârla Mare- und Wietenberg-Kulturen (Boroffka 1994; Şandor-Chicideanu 2003), Lăpuş-Kultur (Kacsó 2011), der bronzezeitlichen Depotfundgruppe Hajdúsámson-Apa-Ighiel-Zajta (David 2002), Hallstattzeit (Basarabi-Kultur: eine Kanne aus Popeşti: Vulpe 2001, Taf. 20).

[76] Becker 1987; Biedermann 1992; Chevalier, Gheerbrant 1994; Golan 2003;

[77] Comşa 1988, 100 « *Vu le caractère et la manière dont était conçu le motif décoratif du symbole solaire ..., il est à présumer que ce type de coupe devait servir seulement à l'occasion de certaines cérémonies. Nous pensons au fêtes licées à l'adoration du soleil* ».

[78] Zu dem Symbolwert des Fußes in der Vorgeschichte, sieh u.a. Schuster 2000; Schuster, Popa 2000, 69 ff.

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wandert. Diese Bewegung ist aber nicht einseitig, sondern findet hauptsächlich von links nach rechts und seltener in die umgekehrte Richtung statt. Wird damit gezeigt, dass der Stern nicht nur am Tag, sondern wahrscheinlich auch in der Nacht herumwandert? Wie kann die Sonne richtig schreiten wenn das *Triskelion* asymmetrisch ist? „*Hinkt*" die Sonne manchesmal? Gibt es Momente wo die Bewegung dieser von der Normalität abschweift; vielleicht in den kalten Jahreszeiten, in welchen die Sonne länger versteckt bleibt? Oder ist die Asymmetrie eigentlich ein Verzierungsfehler, der den Töpfern unterlaufen ist?

Alle diese Fragen warten noch auf ihre Antworten. Unseres Erachtens wird es aber immer klarer, dass das *Triskelion*/ die *Triskeles* sehr wahrscheinlich nur dann richtig verstanden werden kann/ können, wenn das ganze Dekorrepertoire, das auf einer Schale zu finden ist, als eine Einheit betrachtet und entschlüsselt wird.

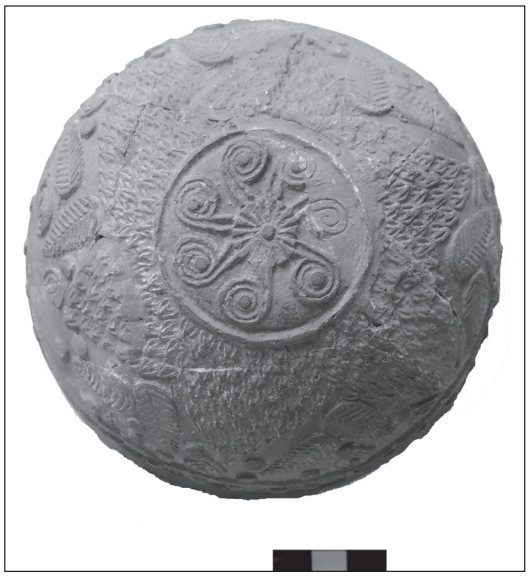

Abb. 17. Vlădicească. Medaillon einer Schale verziert mit einem siebenarmigen Windmühlenrad (Foto Gh. Chelmec).

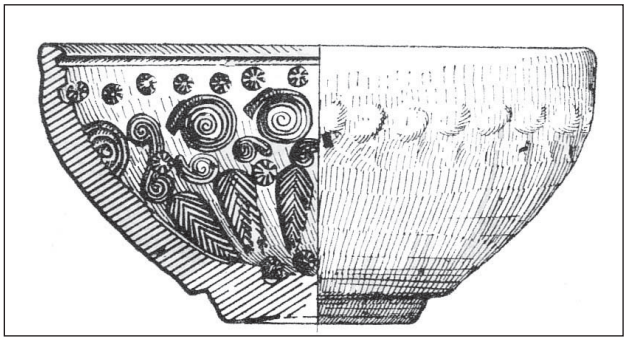

Abb. 18. Radovanu – *Gorgana a doua*. Gussform verziert mit einem *Triskeles* (nach Şerbănescu 1985).

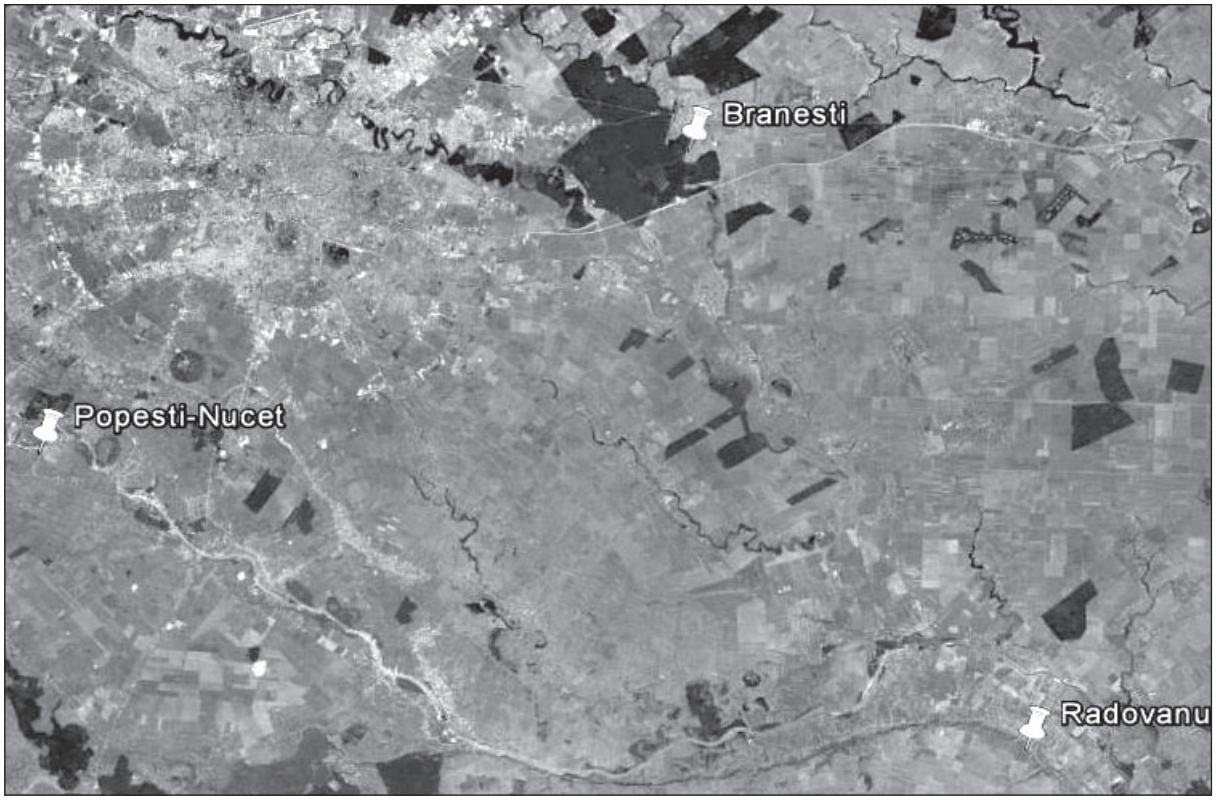

Abb. 19. Brăneşti, Popeşti – *Nucet* und Radovanu. Satellitenbild mit dem Fundorten der mit *Triskeles* verzierten Schalen (Google Earth 2013).

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PIETROASA MICĂ – « *GRUIU DĂRII* » : ÉTABLISSEMENT, CITADELLE ET LIEU DE CULTE À L'ÉPOQUE GÉTO-DACE (IV^{E} S. AV. J.-C. –I^{ER} S. AP. J.-C.)

VALERIU SÎRBU,
SEBASTIAN MATEI

Mots-clés : Géto-Daces, établissement, citadelle, lieu de culte.

Résumé : Nous pouvons dire que, à la fin du IV^{e}-III^{e} s. av. J.-C. et la seconde moitié du II^{e}-commencement du I^{er} s. av. J.-C., il a existé sur le *Plateau* un établissement non fortifié, au I^{er} s. av. J.-C., une citadelle, et au I^{er} s. ap. J.-C., un important lieu de culte. Sur la *Terrasse I* nous n'avons pas identifié, de l'époque géto-dace, de complexes d'habitation, mais seulement beaucoup de dépôts du type *petite butte*, similaires à ceux du *Plateau*, plus quelques foyers et fosses. Tous les vestiges y découverts sont datés au I^{er} s. ap. J.-C.
Reposant sur l'ensemble des découvertes d'époque géto-dace, nous pouvons observer une dynamique toute particulière dans l'évolution du site de *Gruiu Dării,* autant sur le plateau que sur la terrasse méridionale.

Cuvinte cheie: geto-daci, aşezare, cetate, loc de cult.

Rezumat: Se poate aprecia că pe *Platou* la sfârşitul sec. IV-sec. III a. Chr. şi în a doua jumătate a sec. II-începutul sec. I a. Chr. a fost o aşezare nefortificată, în sec. I a. Chr. o cetate, iar în sec. I p. Chr. un important loc de cult. Pe *Terasa I,* din epoca geto-dacică, nu s-au identificat complexe de locuire, ci doar numeroase depuneri de tip moviliţă, similare cu cele de pe *Platou*, dar cu anumite caracteristici proprii, plus câteva vetre şi gropi. Toate vestigiile descoperite aici se datează doar în sec. I p. Chr.
Bazându-ne pe ansamblul descoperirilor din epoca geto-dacică putem observa o dinamică deosebită a evoluţiei sitului de la *Gruiu Dării*, atât de pe platou, cât şi de pe terasa sudică.

Les vestiges découverts à *Gruiu Dării* révèlent une série de caractéristiques insolites par rapport aux découvertes connues dans l'aire des Géto-Daces, en premier lieu par la succession des types de sites, ensuite par certaines catégories de complexes identifiés. Le progrès des fouilles archéologiques a déterminé en particulier le dynamisme dans l'interprétation des vestiges d'époque géto-dace.

Conformément aux résultats publiés des fouilles entreprises en 1973-1989, sous la direction de Vasile Dupoï et Florentina Preda, on a considéré l'existence d'un établissement géto-dace dont la défense était assurée par un *vallum* au noyau en pierre[1].

Même après la première campagne de nouvelles fouilles, en 2001, à laquelle s'ajoute une réinterprétation de la documentation des fouilles précédentes, il était évident que la fortification consistait en une muraille à deux parements bâtis en blocs de calcaire peu taillés et emplecton, tandis que la dernière phase de vestiges impliquait l'existence d'une enceinte sacrée avec des dépôts votifs, la plupart du type petite butte avec un ring de pierres à la base[2].

Les fouilles faites en 2002-2005 ont documenté l'existence d'un établissement daté aux IV^{e}-III^{e} s. av. J.-C., dont le rempart avait été élevé en deux phases, l'accroissement substantiel du nombre et de la variété des dépôts votifs du type petite butte, avec ou sans rings, la présence des foyers isolés, ainsi que d'autres types de complexes, difficiles à définir alors[3].

Les campagnes de fouilles de 2006-2012 ont apporté des informations précieuses concernant autant l'enceinte que les deux terrasses, du nord et du sud. Dans plusieurs endroits on est arrivé jusqu'à la base de la couche archéologique du

[1] Dupoï, Preda 1977, 5-12, pl. I-X; Preda, Dupoï 1979, 77-88; 1980, 143-147; Dupoï 1997, 96-103, pl. I-X.

[2] Dupoï, Sîrbu 2001, 13-20, fig. 1-4, 20-32.

[3] Sîrbu *et alii* 2002, 233-235, pl. 82; 2003, 232-233, pl. 94; 2004, 232-234, pl. 51B; 2005, 271-274; Sîrbu 2004,183-214; Sîrbu, Matei, Dupoï 2005.

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Fig. 1. Pietroasa Mică – *Gruiu Dării*. 1. Muraille Nord; 2. Muraille Ouest-Nord-Ouest.

second Âge du Fer, on a identifié le rempart dans plusieurs zones, autant sur le côté oriental que celui du nord, de nouveaux types de complexes, de sorte que nous disposons à présent d'une documentation beaucoup plus riche sur le site[4].

Ces résultats de la recherche archéologique imposent une nouvelle vision sur l'évolution du site à l'époque géto-dace, que nous allons synthétiser dans ce qui suit.

Les IVe-IIIe siècles av. J.-C.

Nous avons découvert jusqu'à présent 19 complexes datant des IVe-IIIe s. av. J.-C. : deux de-

[4] Sîrbu *et alii* 2006, 267-268, pl. 52; 2007, 268-270, pl. 56; 2008, 225-227; 2009, 173-175; 2010, 142-145; 2011, 99-101; 2012, 104-107; Sîrbu, Matei 2007, 155-182; 2013; Sîrbu 2008, 177-193; 2009, 45-52.

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Fig. 2. Pietroasa Mică – *Gruiu Dării* – complexes des IV^{e}-III^{e} s. av. J.-C. 1. Complexe 123 – habitation de surface ; 2-3 – complexe 111 – four; 4-5 – complexe 105 – four; 6 – complexe 77 – fosse avec dépôt de vases (*apud* Sîrbu, Matei, Dupoï 2005).

meures, 12 fosses, deux foyers, deux fours, une agglomération de matériel archéologique (Fig. 2-4).

Stratigraphie

Les découvertes de cette période couvrent presque toute la superficie du plateau, mais la couche archéologique correspondante ne se trouvait pas partout, mais seulement dans les zones avec des complexes d'habitation importants. Par exemple, la couche de culture a été identifiée dans S7, S12, S15, S16, S17 et S21, mais non pas dans S13 ou S20, où il n'existe que des fosses. Dans S8, il n'y a pas de complexe, mais seulement des matériels de cette époque. La couche archéologique est relativement mince, mesurant 10-15 cm, dans S15-S16, dans la zone des complexes 105 et 203.

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Complexes d'habitation et fours

Le complexe 123 représente les vestiges d'une structure d'habitation (*demeure enfoncée)*, creusée à 1,20 m par rapport au niveau actuel du sol, ayant la base à 1,65 m. Elle se conserve encore sur environ 4 m^2, mais une partie entre dans le côté nord-ouest de la section. Le remplissage en consiste en terre noirâtre, beaucoup de charbon, cendre, gros morceaux d'habitation brûlée, pierres, nombre de fragments céramiques (amphores, *lekane*, brocs, bocaux) et très peu d'os d'animaux[5] (Fig. 2/1). Les données stratigraphiques indiquent que le complexe 111 (four) avaient été aménagés à un moment lorsque l'habitation (C123) n'était plus fonctionnelle.

Le complexe 111 est un *four*, 1,00 m de diamètre et des parois, 5-7 cm d'épaisseur. Bâtie en élévation, la coupole s'est, par la suite, partiellement écroulée à l'intérieur. Le four se trouvait sur une couche de remplissage gris-noirâtre avec de nombreux fragments de vases. Sur ce niveau d'aménagement du four se trouvaient en abondance des fragments de vases, les uns pouvant être partiellement reconstitués, sur une couche de terre jaunâtre relativement compacte, tandis qu'une partie de la coupole écroulée en couvraient quelques-uns (Fig. 2/2-3). Par conséquent, il se peut que, dans cette zone, on ait deux demeures superposées, la première ayant cessé d'exister suite à un incendie, comme en témoigne la grande quantité de cendre et charbon présents dans le remplissage[6].

Le complexe 105 est un *four* ménager de grandes dimensions qui entrait, partiellement, dans le bord nord-est de la section; ses dimensions visibles sur l'axe long sont 1,40 x 1,30 m. Il avait eu, probablement, la forme ovale, et la longueur ne dépassait pas 1,60 m. L'âtre du four se trouvait sur une couche de cailloux et fragments de vases, les uns néolithiques ou Monteoru, avec une croûte, pas plus épaisse que 1,50 cm. La coupole, dont les parois avaient à la base 17 cm d'épaisseur, avait été élevée sur un squelette de treillis, comme l'on peut voir dans les morceaux écroulés à l'extérieur (Fig. 2/4-5). Autour du four, on a découvert six poids pyramidaux entiers et fragmentaires, ainsi que de nombreux fragments d'un bocal[7].

Le complexe 203 représente les débris d'une demeure incendiée, observée à 1,54/1,58/1,60 m, sous la forme d'une zone de terre brûlée, rougeâtre, avec beaucoup de charbon et cendre. Ayant les dimensions 3,60 x 1,40 m, il entrait partiellement, dans le bord de Nord-Ouest et Nord-Est. Le complexe 203 se trouvait au même niveau que le complexe 205 – four ménager de grandes dimensions observé également dans le profil Sud-Est de S16. Les observations du profil ont confirmé le fait que les deux complexes forment, le plus probablement, un ensemble. Le complexe 203 représentaient une demeure de surface avec peu de glaise sur les parois, ce qui nous fait la considérer saisonnière[8].

Fosses

Le complexe 77 était une fosse superficielle, une alvéole, 1,40 x 1,20 m de dimensions. Le matériel céramique est bien abondant, dont trois *lekanai* tournés, l'un reconstitué, et un bocal, partiellement reconstitué. On a encore trouvé dans le complexe une pointe de flèche en bronze à trois ailerons (Fig. 2/6; 3/1-3). Le haut de la fosse a été endommagé par les aménagements des II^{e} s. av. J.-C.-I^{er} s. ap. J.-C.[9]

Le complexe 95 a été, probablement, une *fosse*, 1,30 m de diamètre et la base à -1,70 m. On n'a pas pu saisir le haut du complexe, car il a été identifié un peu plus bas, en plein niveau Monteoru, lorsque la différence de remplissage est devenue plus claire. Au fond de la fosse, une agglomération de blocs de calcaire parmi lesquels se trouvaient des restes osseux d'animaux et des fragments céramiques provenant de deux bols et une amphore de Thasos, pouvant être reconstitués partiellement [10] (Fig. 3/4-6).

Le matériel archéologique de cette période est assez varié et expressif. La plus nombreuse catégorie est représentée par les vases céramiques gétiques (bocaux, bols, brocs, vases de provisions, imitations au tour d'après les *lekanai*) ou des amphores de Sinope, Héraklée du Pont et Thasos (Fig. 3-4). Bien que plus rares, les parures constituent des découvertes importantes, car elles sont de bons indicateurs chronologiques. Mentionnons les fibules de schéma thrace, les bracelets de bronze ou les pendentifs de verre en forme d'amphore et les perles en verre avec masque humain (Fig. 4/1-12). Découvertes autant dans le complexe, que dans la couche, les pointes de flèche de bronze à trois ailerons sont assez nombreuses (Fig. 3/1; 4/1-4). Le seul outil découvert jusqu'à présent est un fragment de couteau de fer.

[5] Sîrbu *et alii* 2008, 226; 2009, 174.

[6] Sîrbu *et alii* 2007, 269; 2008, 226.

[7] Sîrbu *et alii* 2009, 174.

[8] Sîrbu *et alii* 2013, 105.

[9] Sîrbu, Matei, Dupoï 2005, 85, fig. 86/1-4.

[10] Sîrbu, Matei, Dupoï 2005, 89, fig. 86/5-7.

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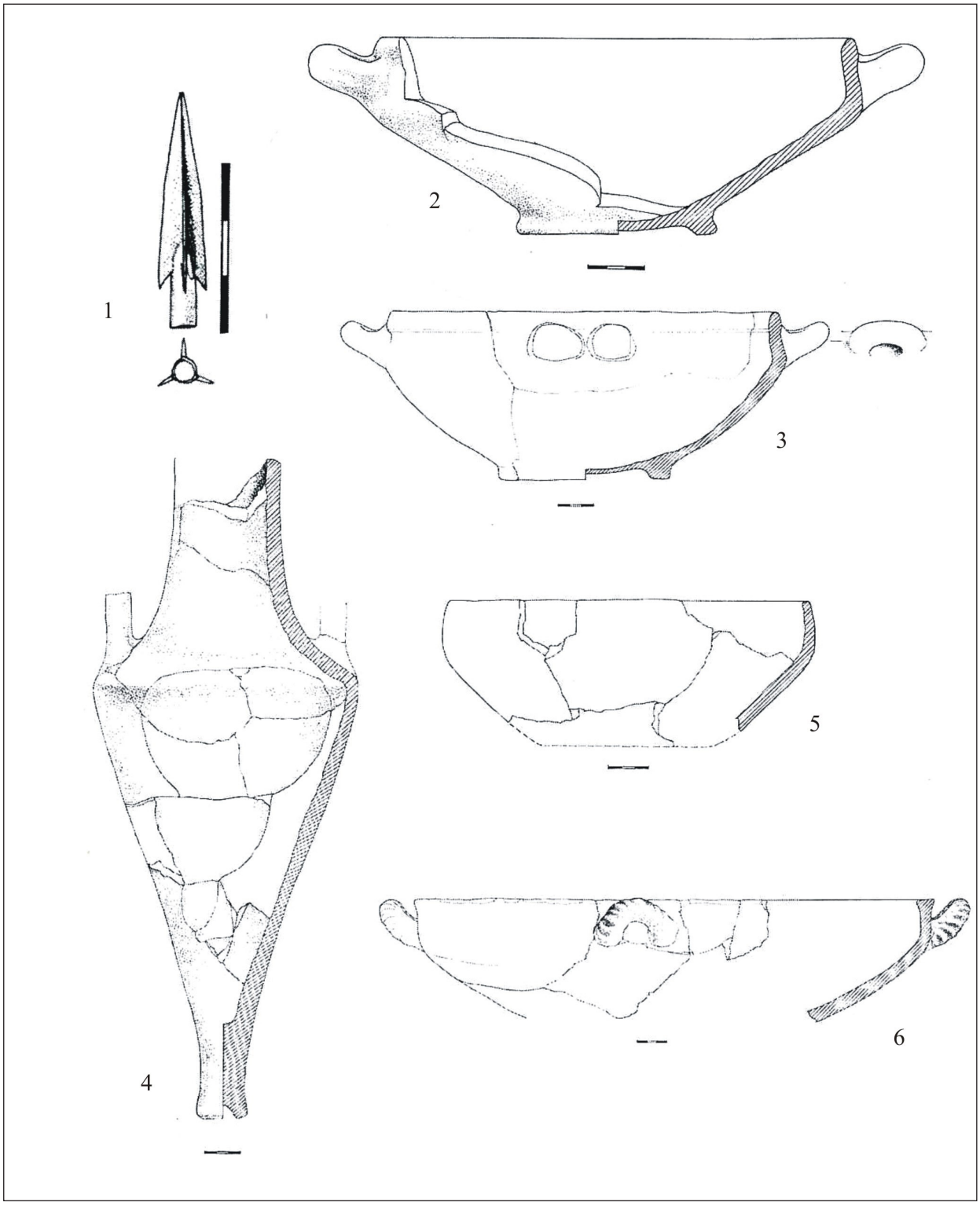

Fig. 3. Pietroasa Mică – *Gruiu Dării*. Pièces du Complexe 77 (1-3) et Complexe 95 (4-6) (*apud* Sîrbu, Matei, Dupoï 2005).

Chronologie

Un coup d'œil sur les matériels archéologiques nous ferait dater l'établissement gétique de *Gruiu Dării* aux IV^{e}-III^{e} s. av. J.-C. Cependant, nous considérons, à partir d'une série de découvertes, que l'intervalle chronologique pourrait être restreint. Les amphores marquées ont la plus grande pertinence chronologique. Les astynomes présents sur les deux timbres d'amphore de Sinope (Fig. 4/13) s'encadrent, selon N. Conovici, au début du groupe Vc, qui date juste après le milieu du III^{e} s. av. J.-C.[11].

Les perles de verre polychrome avec masque humain (Fig. 4/10-11) constituent une autre catégorie de pièces à pertinence chronologique. Les découvertes faites en milieu hellénistique,

[11] Conovici 1997, 142-154.

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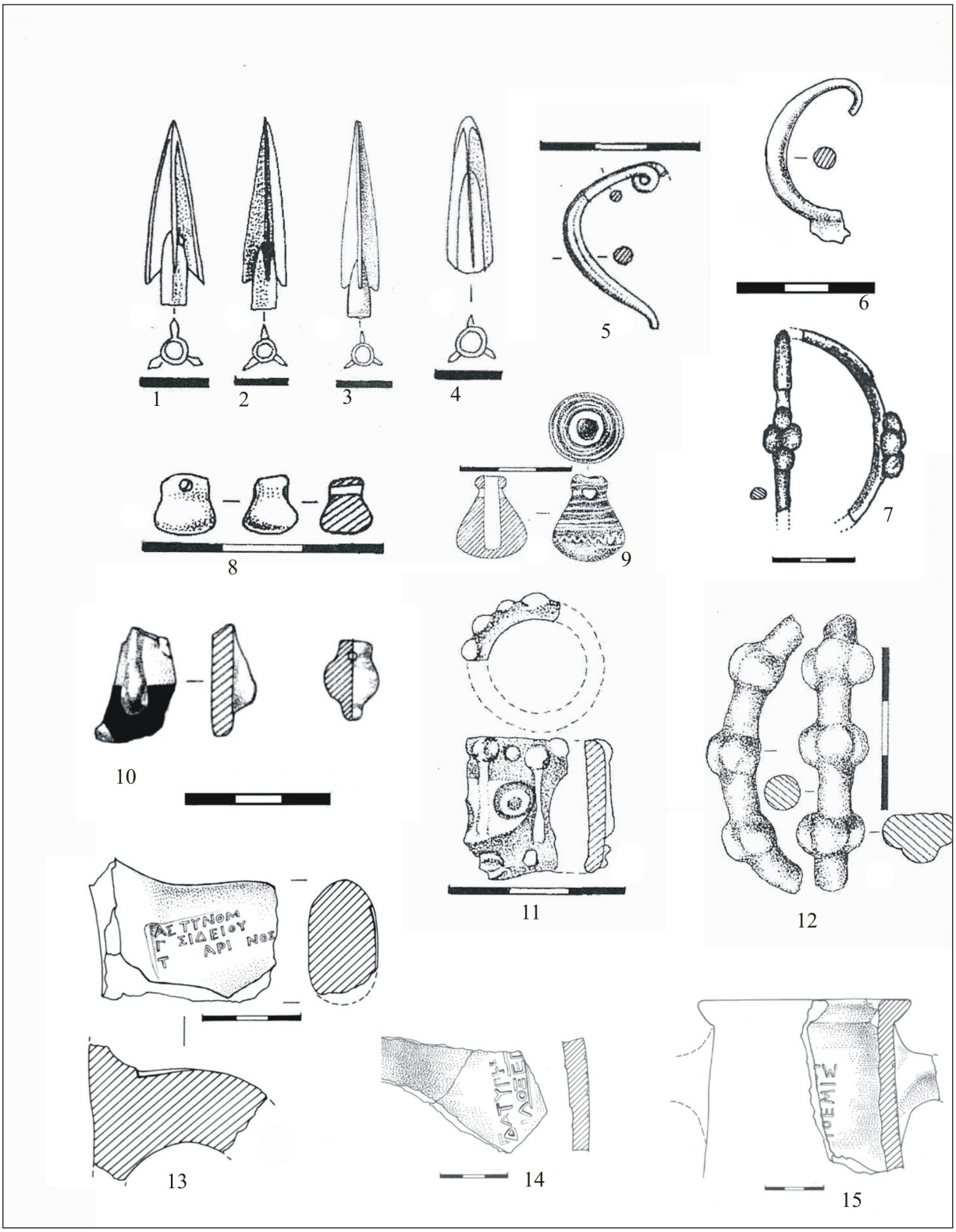

Fig. 4. Pietroasa Mică – *Gruiu Dării.* Pièces découvertes dans la couche archéologique des IV^e^-III^e^ s. av. J.-C. (*apud* Sîrbu, Matei, Dupoï 2005).

en particulier à Mangalia et Histria assurent une datation de ces pièces au III^e^ s. av. J.-C.[12]

Si l'on prend en considération les analogies de Zimnicea[13], la fibule en argent, de schéma thrace, trouvée à *Gruiu Dării* (Fig. 4/5-6) s'encadre plus largement, entre 350 et 250 av. J.-C.; néanmoins, les associations avec des importations hellénistique nous font encadrer la plupart des fibules de ce type de Zimnicea dans la première moitié du III^e^ s. av. J.-C.

Nous pouvons apprécier, selon des éléments de chronologie offerts par quelques-unes des découvertes, que l'établissement gétique de *Gruiu*

[12] Măndescu 2010, 365-373.

[13] Alexandrescu 1980, 50.

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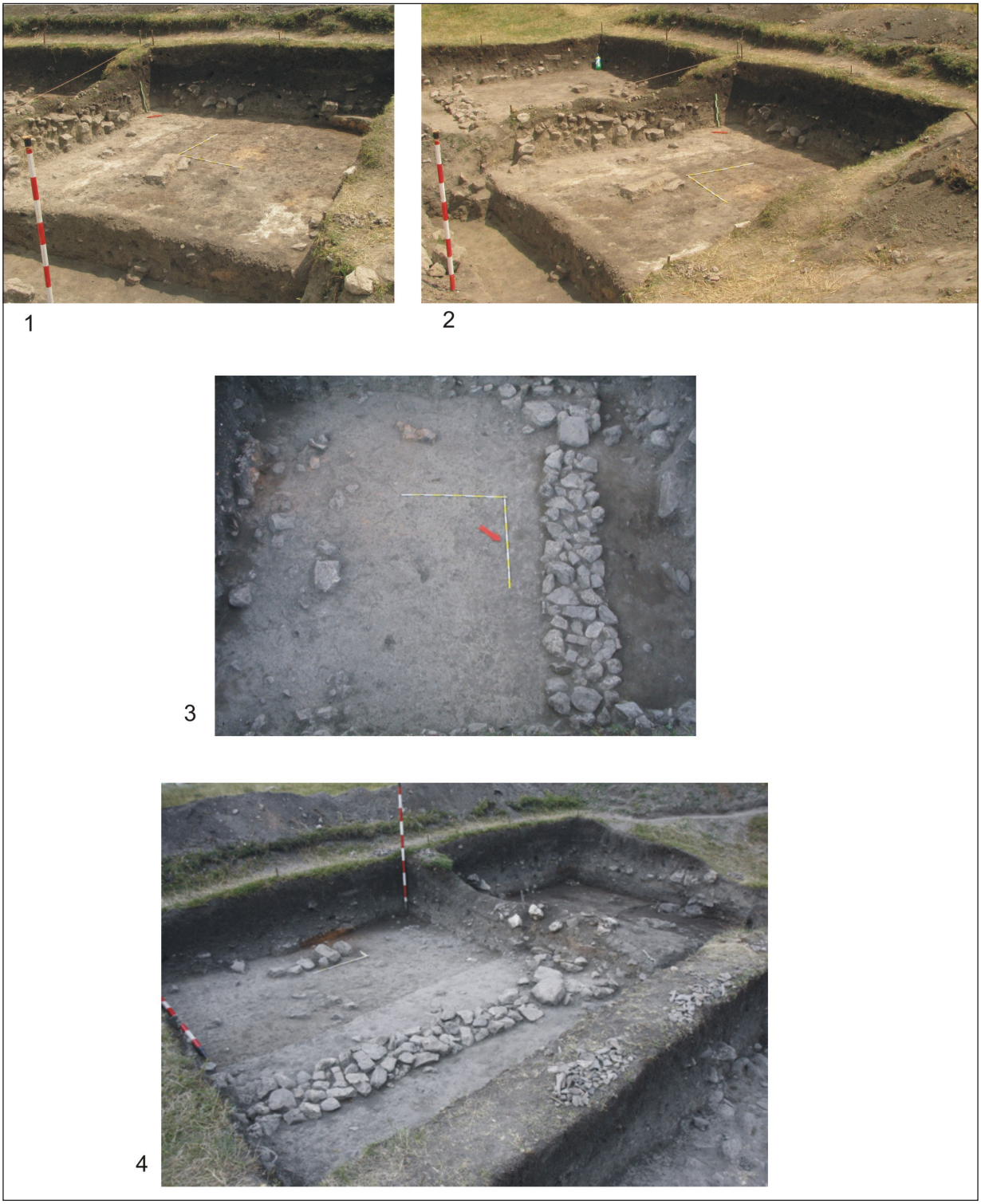

Fig. 5. Pietroasa Mică – *Gruiu Dării.* Complexes des II^e^-I^er^ s. av. J.-C. 1-2. Complexe 144; 3-4. Complexe 132 – base de la paroi en pierre (*apud* Sîrbu, Matei, Dupoï 2005).

Dării s'encadre, le plus probablement, au III^e^ s. av. J.-C., sans exclure pour autant la fin du IV^e^ s. av. J.-C.

L'établissement gétique de *Gruiu Dării* n'est pas singulier dans la zone. On a signalé et publié des découvertes plus anciennes, telles celles de Sărata Monteoru[14], Petrişoru-Racoviţeni[15], Cârlomăneşti, Sibiciul de Sus[16], ainsi que plus récentes, comme à Oratia ou Târcov[17], toutes dans la zone de courbure des Carpates. Ces établissements semblent dater toujours du III^e^ s. av. J.-C., comme en témoignent les pièces y découvertes.

Par conséquent, il est possible que, au moins pour la zone de courbure des Carpates, nous

[14] Nestor, Zaharia 1955, 506, fig. 8.

[15] Trohani 1981, 45-53.

[16] Buzdugan, Trohani 1992, 42.

[17] Matei 2009, 106-107.

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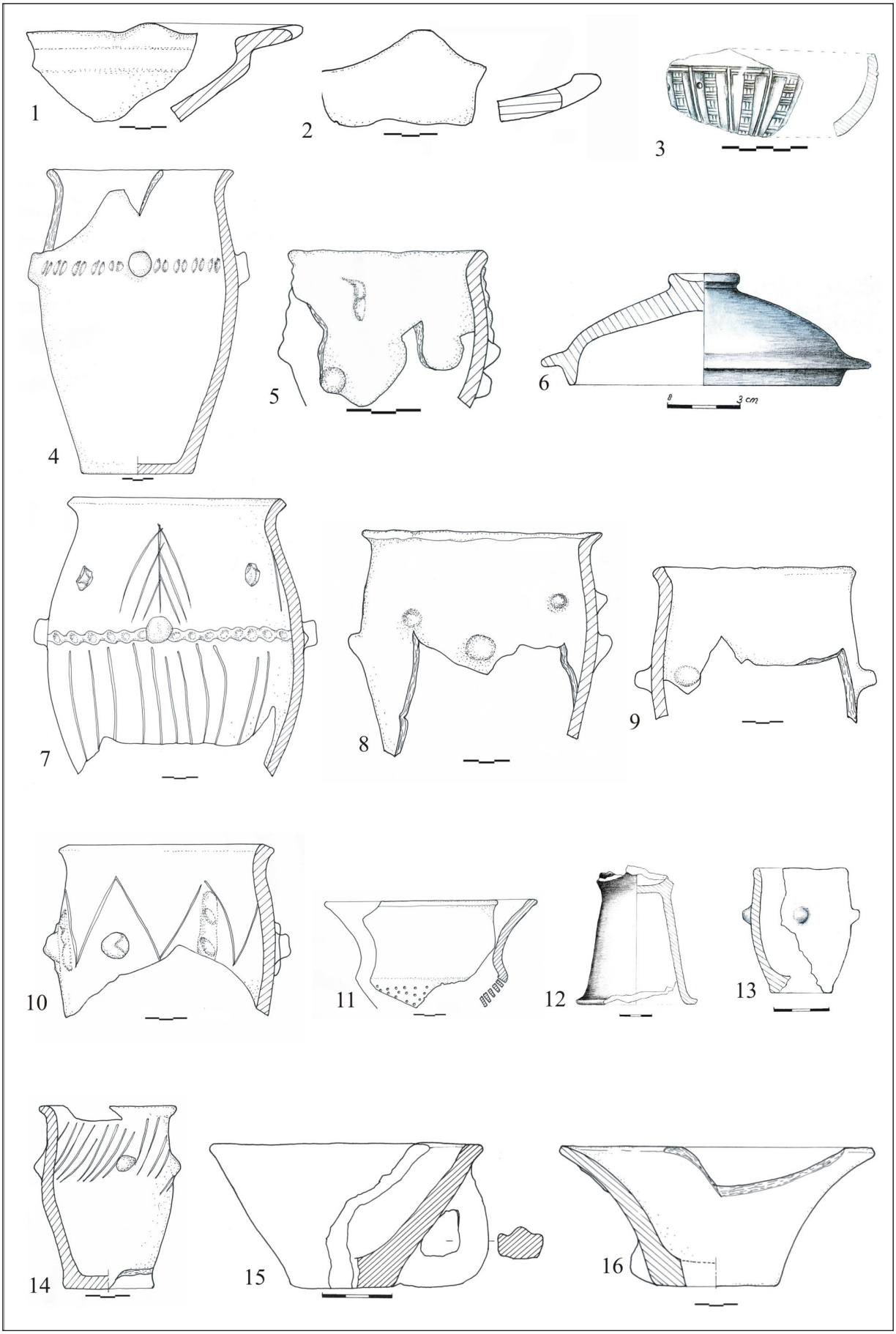

Fig. 6. Pietroasa Mică – *Gruiu Dării*. 1-3. Vases céramiques du complexe 159 (habitation de surface); 4-16. Vases céramiques du Complexe 78 (fosse).

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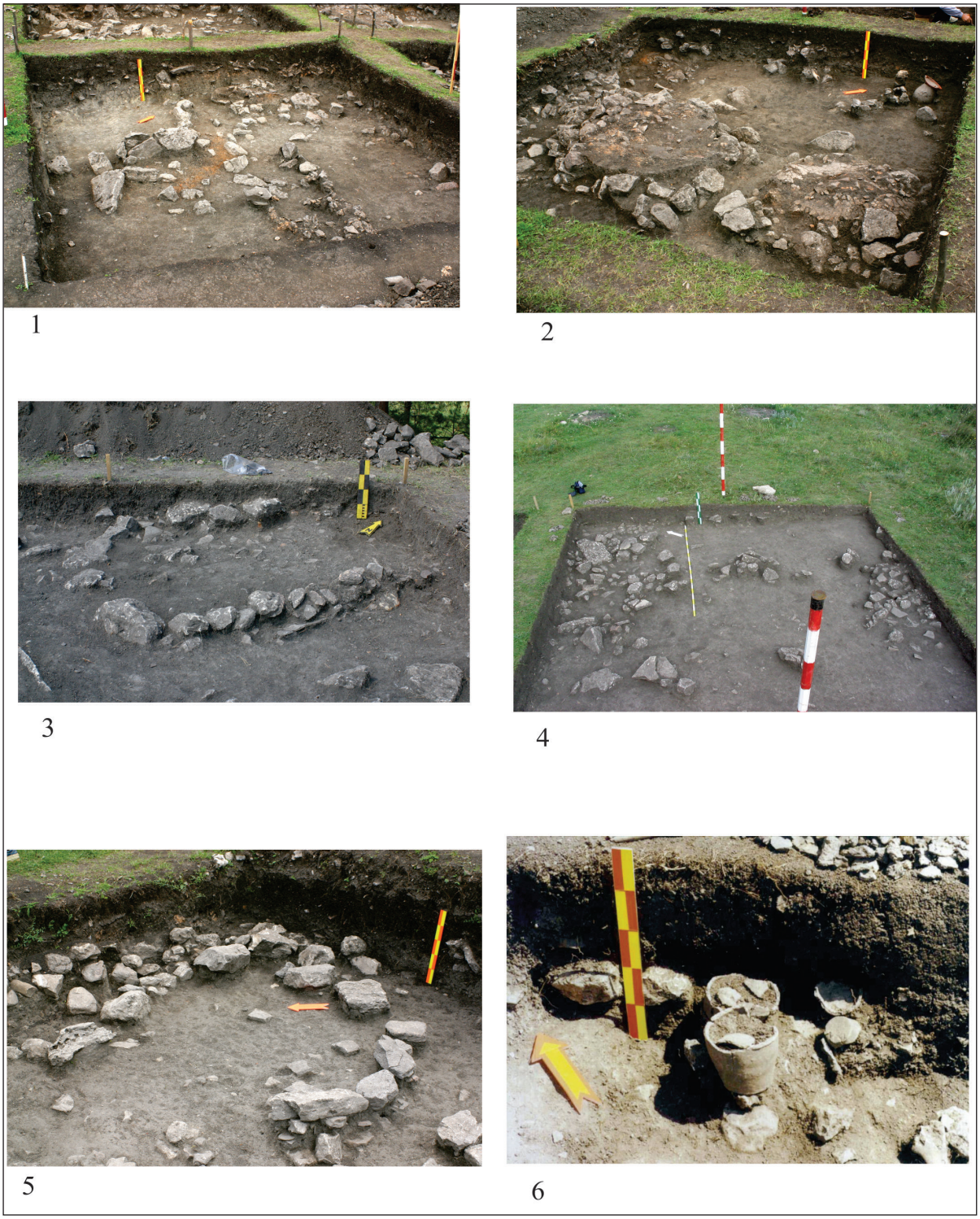

Fig. 7. Pietroasa Mică – *Gruiu Dării* – complexes du I^er^ s. ap. J.-C. 1. Complexes 14 et 21 – profil; 2. Complexes 16 et 19; 3; Complexe 45; 4. Complexes 87 et 102; 5. Complexe 8; 6. Complexe 2A (*apud* Sîrbu, Matei, Dupoï 2005).

ayons un horizon de découvertes gétiques qui s'encadreraient au III^e^ s. av. J.-C., sans exclure une datation au IV^e^ s. av. J.-C., mais nous n'avons pas jusqu'à présent de preuves sûres à cet égard.

Les II^e^-I^er^ siècles av. J.-C.

Nous avons identifié 70 complexes datant de cette période: sept demeures, 12 foyers extérieurs, 41 fosses et dix complexes que l'on ne pourrait définir.

Stratigraphie

Les vestiges de cette période représentent le dépôt le plus substantiel de l'Âge du Fer, dont l'épaisseur varie sur le plateau de *Gruiu Dării*, selon l'intensité de l'habitation et la densité des complexes.

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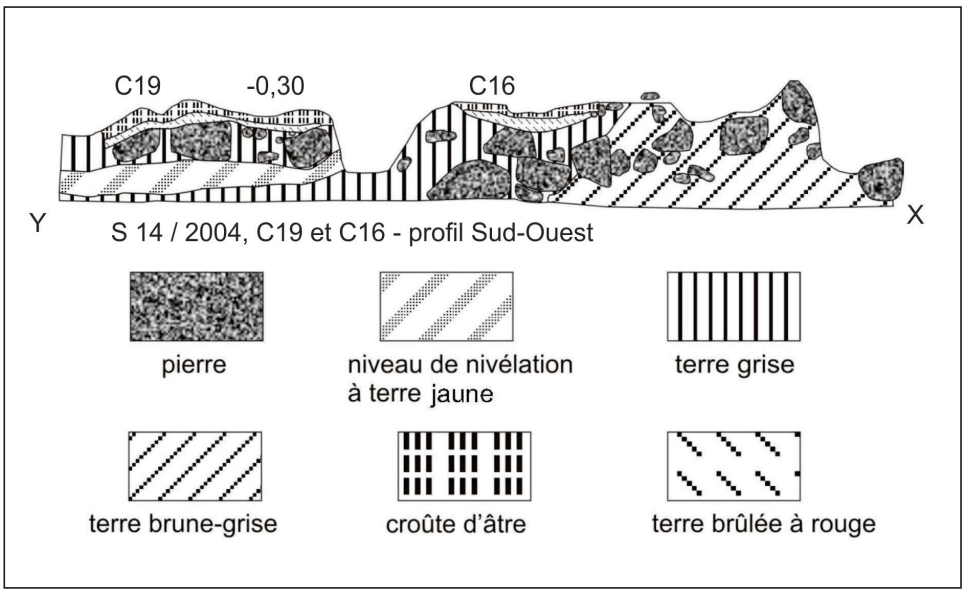

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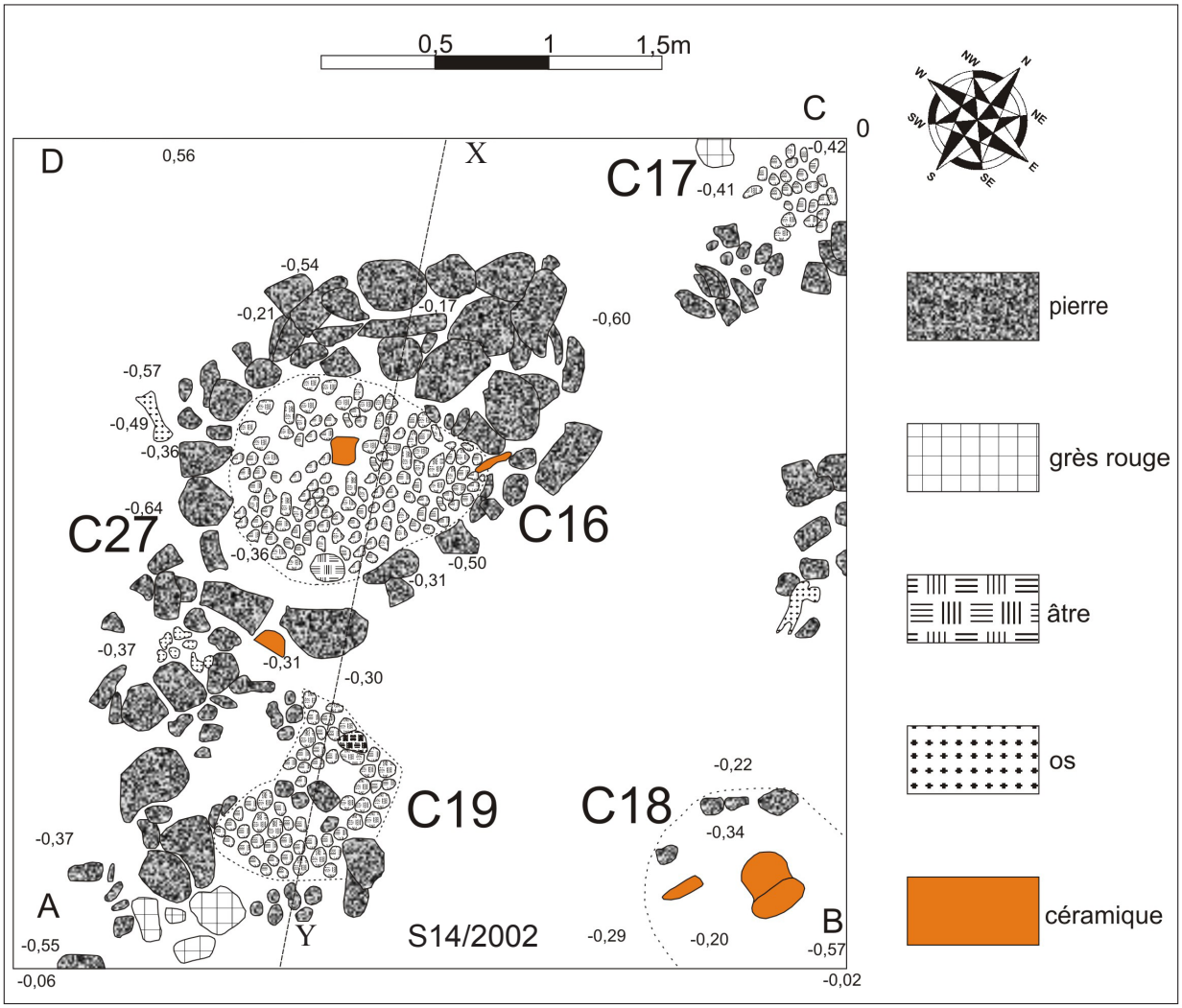

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Fig. 8. Pietroasa Mică – *Gruiu Dării* – complexes du I^er^ s. ap. J.-C. 1. Profils des complexes 16 et 19; 2. Plan des complexes 16, 17, 18 et 19 (*apud* Sîrbu, Matei, Dupoï 2005).

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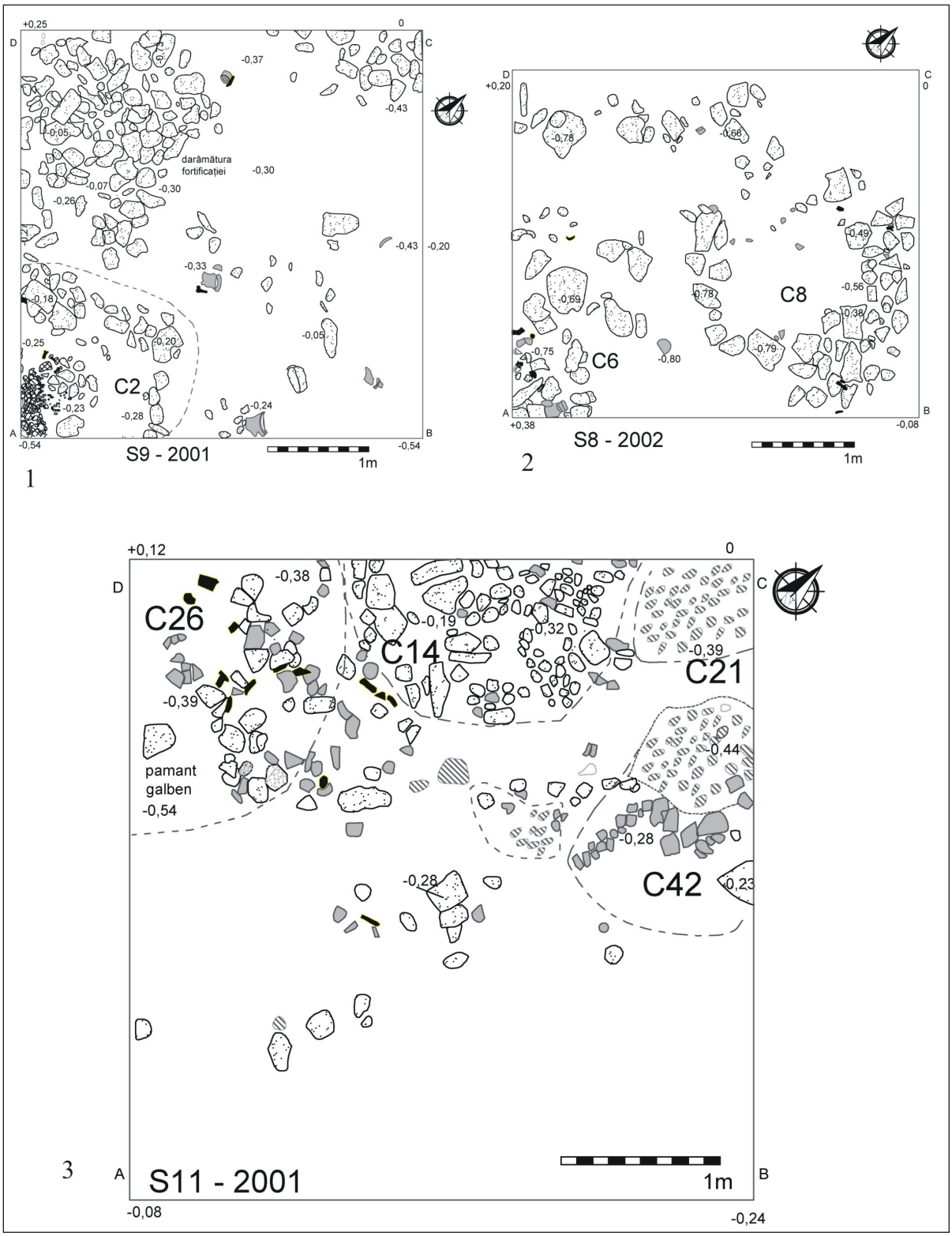

Fig. 9. Pietroasa Mică – *Gruiu Dării* – complexes du I^er^ s. ap. J.-C. 1. Complexe 2; 2. Complexe 8; 3. Plan des complexes 14, 21, 26, 42 (*apud* Sîrbu, Matei, Dupoï 2005).

Ainsi, dans S15, la couche mesurait entre -(0,70-1,20/1,30) m, donc 50-60 cm d'épais, saisie, au moins dans trois niveaux, datables dans la seconde moitié du II^e^-I^er^ s. av. J.-C.

Dans S17, la couche de cette époque mesurait entre -(0,70-1,20/1,30) m, donc 60-65 cm d'épais, avec des matériels et des complexes datés aux II^e^ -I^er^ s. av. J.-C. Il contient de nombreux fragments de poterie, os, enduit brûlé, charbon, cailloux. On peut, d'après la texture des sédiments et la couleur, distinguer trois niveaux.

Dans S8, la couche avait entre -(0,70/0,75-1,00) m, donc seulement 25-30 cm d'épais, avec, tout au plus, deux niveaux visibles avec des matériels et des complexes datés dans la seconde moitié du II^e^-I^er^ s. av. J.-C.

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Complexes d'habitation

Le complexe 144 était une *structure rectangulaire* creusée, dont les dimensions visibles mesuraient 3,70 x 2,30 m. On peut le saisir seulement sur trois côtés, le quatrième étant entré dans le bord sud-est de la section. On l'a saisi à -1,14/1,19 m, mais il est disparu 10-15 cm plus en bas. Le remplissage était gris foncé, pigmenté d'enduit brûlé et charbon, contenant des cailloux, des os d'animaux et peu de matériels céramiques, bien fragmentés (Fig. 5/1-2). Des interventions ultérieures ont endommagé une partie de l'intérieur et le côté sud-ouest[18]. Le complexe est daté au Ier s. av. J.-C.

Le complexe 132 se présentait sous la forme de deux « bandes », 0,60 m de large, composées de cailloux mis l'un à côté de l'autre, formant un angle droit, la première sur environ 1,00 m de long, entrant dans le bord Nord-Est de la section, tandis que la seconde n'était visible que sur 0,30 m, le reste entrant dans le bord Nord-Ouest. A l'intersection des deux « bandes » se trouvait le complexe 137, une structure circulaire en pierre (D=1,00 m), qui indiquait l'existence d'un complexe creusé (Fig. 5/3-4). Dans le stade actuel de la recherche, il semble que ce soit la fondation d'un bâtiment, dont il existe encore deux côtés et, probablement, la fosse pour le poteau du coin. Se trouvant dans la section 25, le côté Nord-Ouest a été sérieusement endommagé par l'aménagement de la fortification, de sorte que l'on ne voit plus qu'un alignement dérangé de cailloux et une fosse de poteau[19]. Il nous reste, lors des futures campagnes de fouilles, de clarifier la partie Nord-Est du complexe.

Ayant de grandes dimensions, **le complexe 159**, a été saisi à -1,20 m de profondeur, sur une superficie de 1,90 x 1,60 m, entrant dans les témoins de Nord-Ouest et Sud-Ouest de la section. Sa base se trouvait à une profondeur de -1,50 m. Les grandes dimensions, la forme rectangulaire, la petite profondeur et la présence de petits groupes de cailloux vers le bord, qui pourraient être des fosses de poteaux, nous font placer ce complexe dans la catégorie des habitations. Le matériel archéologique consiste en fragments céramiques et os d'animaux. La poterie y découverte est particulièrement intéressante car les formes (bocaux, brocs, vases sur pied, bols à décor en relief) sont caractéristiques au IIe s. av. J.-C., éventuellement Ier s. av. J.-C.[20] (Fig. 6/1-3). Il représente, jusqu'à présent, le plus ancien complexe de la période « classique » géto-dace, découvert à Pietroasa Mică-*Gruiu Dării*.

Fosses

Le complexe 78 est une fosse tronconique (D. bouche = 1,10 m; DB = 1,60/1,65 m), saisi à -0,80 m, ayant 1,47 m de profondeur. Le remplissage était gris-jaunâtre, ameubli, avec des pigments d'enduit brûlé et charbon, des zones avec de cendre et taches de terre jaune, provenant probablement des parois de demeure non brûlées, plus des cailloux petits et moyens, fragments céramiques, os d'animaux et de nombreux morceaux de foyers. Les vases céramiques sont représentés par des bocaux, tasses-lampes, brocs, couvercles, *pithoi*, vases à pied, beaucoup complets ou pouvant être partiellement reconstruits (Fig. 6/4-16). On a trouvé également quelques pièces en fer, dont un fragment de couteau[21]. La position stratigraphique et le matériel découvert situent ce complexe dans la seconde moitié du Ier s. av. J.-C.

Le complexe 174, fosse située au centre de la section, saisie à -0,95 m, est légèrement ovale, 1,40 x 1,60 m de dimensions. Le remplissage est jaunâtre vers le centre et gris vers le bord, avec du charbon et d'enduit brûlé. Le matériel céramique est relativement abondant, dont une amphore locale, faite main en pâte demi-fine, à engobe polie à l'extérieur. Le matériel découvert ainsi que la position stratigraphique sont des arguments en faveur de la datation de cette fosse dans la première moitié du Ier s. av. J.-C.[22]

Le Ier siècle ap. J.-C.

On n'a découvert, datant du Ier s. ap. J.-C., que deux types de complexes, 69 dépôts du type petite butte et six foyers isolés. Sur les 69 dépôts du type petite butte, 53 avaient des rings de pierres, à l'intérieur desquels se trouvaient neuf foyers *in situ*, huit autres cas étant des foyers fragmentés déposés, 16 autres dépôts n'avaient pas de rings de pierre (Fig. 7-9).

L'essentiel est que l'on n'a pas identifié de type de complexes d'habitation, annexes ménagères (fosses, ateliers, abris saisonniers etc.) datant du premier siècle de l'âge chrétien.

Complexes du type petite butte et foyers

Le complexe 2 s'avère être du type petite butte, avec un ring à la base, à 0,70/0,75 m de profondeur, forme ovale, le diamètre maximum -1,60 m et un foyer *in situ* (D = 0,80 x 0,70 m), aménagé

[18] Sîrbu *et alii* 2009, 174.

[19] Sîrbu *et alii* 2008, 225; 2011, 100.

[20] Sîrbu *et alii* 2010, 142; 2011, 99.

[21] Sîrbu, Matei, Dupoï 2005, 85-86, fig. 35/5; 80/7-20.

[22] Sîrbu *et alii* 2012, 104.

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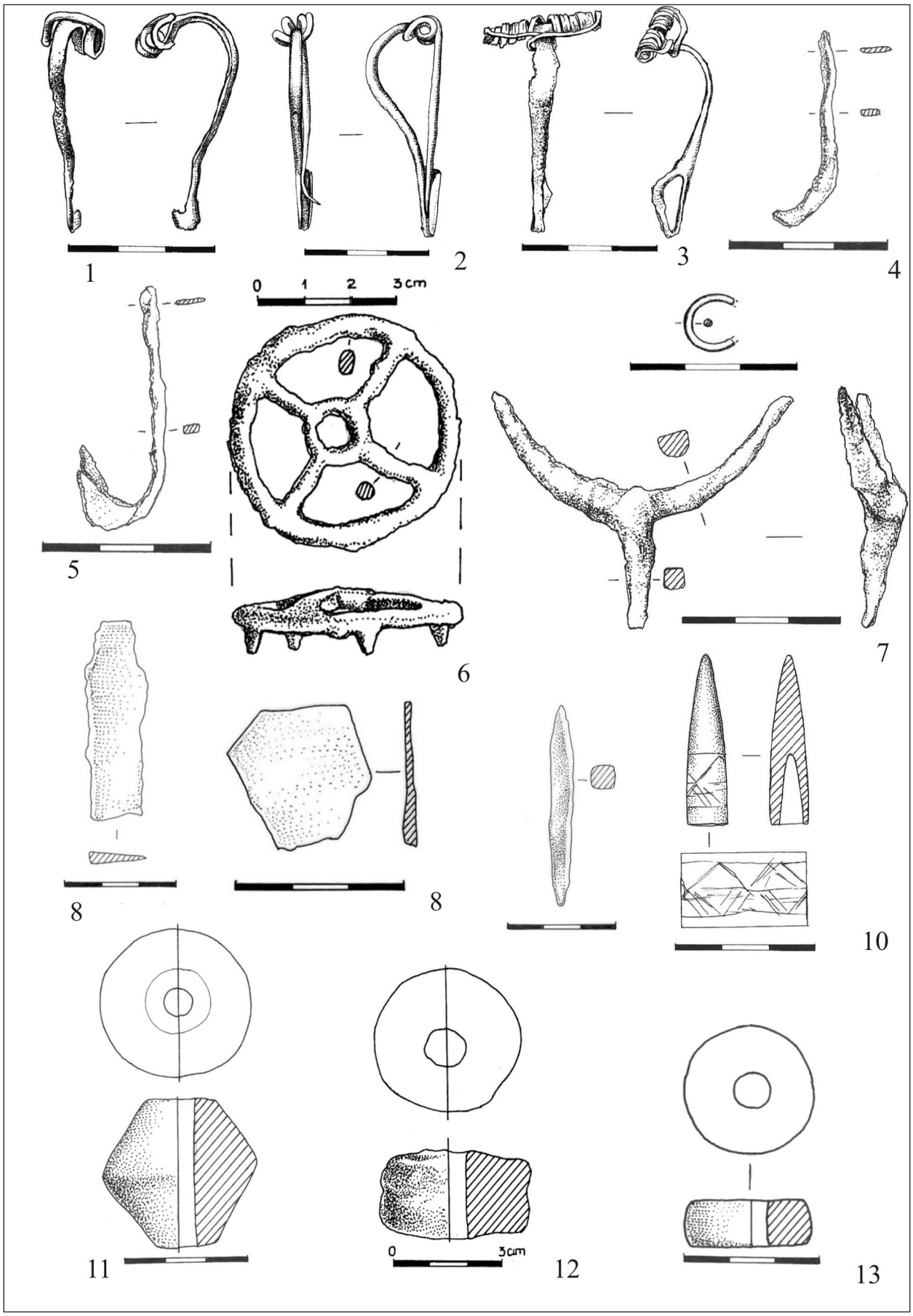

Fig. 10. Pietroasa Mică – *Gruiu Dării* – pièces du complexe 2 (*apud* Sîrbu, Matei, Dupoï 2005).

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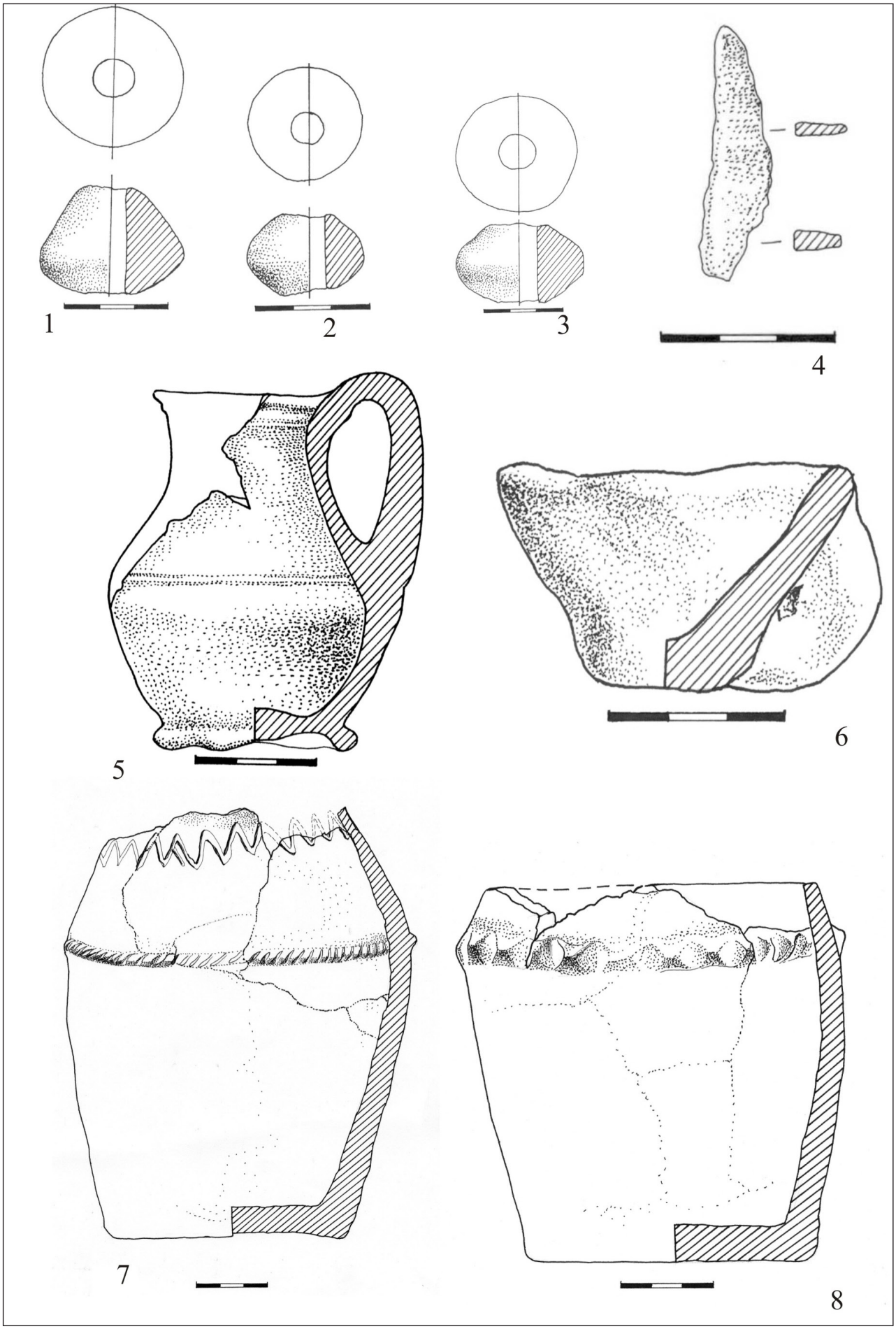

Fig. 11. Pietroasa Mică – *Gruiu Dării* – pièces du complexe 2A (*apud* Sîrbu, Matei, Dupoï 2005).

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sur un socle de cailloux, ainsi que quelques éclats, le liant étant l'argile sablonneuse. La croûte du foyer, 3 cm d'épais, ne se trouvait que sur certaines portions, aussi croyons-nous qu'on l'avait détachée intentionnellement dès l'antiquité, pour une raison difficile à établir maintenant (Fig. 9/1; 10). On remarque, dans le mobilier, deux fibules de fer et une de bronze, un éperon et une branche de mors discoïdale en fer, une pointe de flèche en os, des fusaïoles et de nombreux fragments de vases, les uns pouvant être partiellement reconstruits (bocaux, vases sur pied, bols, couvercles). Env. 10-40 ap. J.-C.[23]

Le complexe 2A, petite butte sans ring à la base, de forme ovoïdale (D = 2,60 x 2,20 m) et 0,50 m de haut. Il a l'aspect d'une grande agglomération de matériel archéologique (fragments céramiques, enduit brûlé, os d'animaux) et pierres. A -0,20-0,25 m, se trouvaient les parties hautes de deux bocaux entiers, mis verticalement, l'un auprès de l'autre, remplis de morceaux d'enduit brûlé, et un couvercle fragmentaire, tous faits à la main. Les vases étaient entourés, d'un côté et de l'autre, d'une masse compacte d'enduit brûlé qui décrivait un demi-cercle, 1,20 m de diamètre, entrant, partiellement dans le bord de Nord-Est (Fig. 7/6; 11). Env. 30-70 ap. J.-C.[24]

Le complexe 8, dépôt du type petit butte avec un ring à la base, de forme circulaire, au diamètre maximum de 2,00 m. On l'a saisi à 0,30-0,40 m de profondeur, sous la forme d'une agglomération de pierres, fragments céramiques, enduit brûlé et os d'animaux. On a découvert, à l'intérieur du complexe, nombre de fragments céramiques, enduit brûlé et os; les pierres manquaient. La base du ring se trouvait à 0,70/0,75 m. Trois autres rings plus petits, à la base plus haute que le ring-mère, s'attachaient à ce ring, ce qui pourrait suggérer un aménagement ultérieur[25] (Fig. 7/5; 9/2).

Le complexe 8A, à l'Est du ring-mère, avait un ring composé de cinq pierres mises en cercle; il se voyait clairement à 0,53 m de profondeur, ayant au milieu des fragments de vases, os d'animaux et une pointe de flèche en fer.

Le complexe 8B, à l'Ouest du ring-mère, se voyait clairement dès 0,25 m de profondeur et avait la base à 0,50 m. De forme circulaire, le ring avait 0,90 m de diamètre et contenait dedans des fragments céramiques et os d'animaux. Si l'on prend en compte le rapport stratigraphique avec le complexe 8, dont la base se trouvait à 0,20 m plus en bas, et le manque de quelque 2-3 pierres de son ring, il se peut que ce petit complexe ait été aménagé ultérieurement et qu'il représente en fait un complexe indépendant. Au moment de l'aménagement de ce complexe, les pierres du ring de 8C étaient probablement visibles, en raison aussi de leurs grandes dimensions.

Situé au nord du ring-mère, le **complexe 8C** avait le ring presque circulaire, mis en évidence à 0,45/0,47 m de profondeur, 0,60 m de diamètre; des fragments céramiques, enduit brûlé et os d'animaux se trouvaient parmi les pierres. Les complexes sont datés dans la première moitié du I^{er} s. ap. J.-C.

Le complexe 16 représente l'un des plus intéressants et typiques complexes du type petite butte avec ring compacte à la base, de forme ovoïdale, 2,30 x 1,50 m de dimensions et 0,35 m de haut, foyer *in situ*, mis en évidence à une profondeur de 0,27-0,30 m, lorsqu'on avait mis au jour un foyer, 1,20 x 1,00 m, aménagé sur une structure ovoïdale en pierres, 2,30 x 1,50 m de dimensions. Bien qu'il semble que le foyer ait été plat au début, il s'est fortement dénivelé à cause du tassement de la terre et du mouvement des pierres, dans certains endroits la croûte s'est cassée.

Suite au creusement, auprès du ring, on a remarqué que celui-ci se composait de plusieurs rangées de pierres massives, plus de 30 cm, les unes étant mises de chant. Nous avons trouvé à l'intérieur du ring des pierres et parmi les pierres, de nombreux fragments céramiques, les uns provenant de vases qui peuvent être partiellement reconstruits, tels des tasses-lampes ou bocaux, peu d'os d'animaux et enduit brûlé. Mais, au-dessus ou sur le foyer, on n'a trouvé aucun fragment céramique, ce qui s'observe également dans le complexe 19, tout le matériel céramique étant déposé autour du foyer (Fig. 7/2; 8). Nous avons trouvé aussi dans ce complexe une fibule romaine de bronze en forme de queue de paon. Env. 25-75 ap. J.-C.[26]

Le complexe 19 est un dépôt du type petite butte, avec un ring compacte à la base, de forme presque circulaire, 1,30 m de diamètre et -0,30 m de haut et foyer *in situ*. On l'a coupé sur la direction Nord-Nord-Ouest – Sud-Sud-Est et on a remarqué que le foyer se trouvait sur une structure de pierres plus grosses ou plus petites; la croûte avait 1 cm d'épais, dure et bien crépie, avec le noyau du foyer, l'épaisseur ne dépassait pas 2-2,5 cm. Les pierres de ce complexes étaient mises sur une couche gris-jaunâtre, avec des pigments de

[23] Sîrbu, Matei, Dupoï 2005, 66, fig. 33/3; 50-51.

[24] Sîrbu, Matei, Dupoï 2005, 65-66, fig. 6/2; 52.

[25] Sîrbu, Matei, Dupoï 2005, 66-67, fig. 6/5; 32; 56/1-5.

[26] Sîrbu, Matei, Dupoï 2005, 69-70, fig. 7/1-4; 13/3; 59.

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charbon, à une profondeur de 0,60 m (Fig. 7/2; 8). Au-dessus et au niveau du foyer, mais pas sur le foyer, on a découvert des fragments de poterie, os d'animaux, enduit brûlé et divers objets métalliques, dont une herminette (?), deux couteaux et un ressort de fibule de fer. Env. 25-75 ap. J.-C.[27]

Le complexe 21 est un dépôt du type petite butte, sans ring à la base, de forme presque circulaire, 1,50 m de diamètre et -0,25 m de haut, sous la forme d'une concentration massive d'enduit brûlé, certains morceaux assez grands – plus de 10-15 cm, dans toutes les positions, sa base étant à 0,45 m. Parmi les morceaux d'enduit se trouvaient des fragments céramiques et os d'animaux (Fig. 7/1; 9/3; 12). Au bord de Nord-Ouest de S11, se trouvait un bocal pouvant être reconstitué, à l'intérieur duquel il y avait de petits morceaux d'enduit brûlé, bocal cassé à cause de la pression de la terre, décoré d'une bande entaillée et sapin, tandis qu'en dessous, il y avait un *kantharos* peint, manquant de bouche, et tout près, une passoire tournée, cassée sur place. Env. 25-100 ap. J.-C.[28]

Le complexe 21a représentait un dépôt du type petite butte, avec ring de pierres (D = 0,60 m), la base à 0,45 m de profondeur, attaché à C21, il superposait, partiellement, C14. Le mobilier consistait en deux pointes de flèche et un couteau, tous en fer. Env. 25-100 ap. J.-C.[29]

Le complexe 45, dépôt du type petite butte, avec ring à la base, saisi immédiatement après avoir enlevé la couche végétale, à -0,10-0,12 m de profondeur, comme une agglomération compacte de pierres ayant des dimensions entre 5 et 20 cm, sur 1,40 m de diamètre. Après avoir enlevé les grosses pierres, à 0,20-0,25 m de profondeur, on a mis au jour une quantité substantielle de matériel archéologique (fragments céramiques, os d'animaux et enduit brûlé) et des pierres. A un regard plus attentif, nous avons constaté l'existence de plusieurs « niveaux » de dépôts, entre -0,20-0,50 m ; des fragments céramiques provenant d'un ou deux bocaux cassés *in situ*, dont les éclats étaient mis comme un tapis, sous lesquels il y avait de petits cailloux et bien des morceaux d'enduit, et ensuite un autre niveau de fragments céramiques, beaucoup provenant de vases que l'on pourrait partiellement reconstituer et de nouveau une couche d'enduit avec des cailloux. Ce matériel archéologique se trouvait dans un sol grisâtre à aspect granulé. A 0,30 m de profondeur, prenait clairement contour un ring, 2,80 x 2,00 m, composé de pierres massives (entre 20 et 40 cm de long), mises l'une à côté de l'autre, la base étant à -0,50 m (Fig. 7/3; 13; 14). A cette profondeur la terre sur laquelle se trouvait le ring est devenue jaunâtre, pour qu'à 0,60 m elle soit gris-jaunâtre, compacte, couche sur laquelle se trouvaient des dépôts plus anciens (les complexes 63 et 75).

Le dépôt de matériel archéologique qui avait au début la forme d'une petite butte, s'est par la suite aplati, dépassant les pierres du ring, ce qui a été saisi pendant les fouilles. A la base du ring, vers le milieu, nous avons découvert un bocal, mis verticalement, qui contenait des os d'animaux. Le complexe 45 est bien riche en vases céramiques, car on y a mis au jour 12 vases pouvant être entièrement ou partiellement reconstitués (bocaux, tasses-lampes, vases sur pied, brocs, bols, couvercles et *pithoi*). Env. 25-50 ap. J.-C.[30]

Observations générales

Les diamètres des rings varient entre 0,40 m et 1,80 m, et la hauteur conservée mesure entre 0,20 et 0,50 m. Certains dépôts, tels C16 et C19, ont l'apparence de véritables autels, parce qu'ils sont des constructions massives en pierre, et les foyers brûlés témoignent du fait que l'on y accomplissait des rituels.

L'inventaire découvert comprend une variété particulière de pièces, quelques-unes déposées entières, d'autres fragmentaires, telles que des vases céramiques (presque toute la gamme de récipients utilisés alors par les Géto-Daces : bocaux, coupes sur pieds, tasses, tasses-lampes, vases à provisions etc.), des outils et des ustensiles (couteaux, aiguilles, crochets, ciseaux, fusaïoles, clous, etc.), des ornements et des accessoires vestimentaires (fibules, bracelets, boucles d'oreilles, perles, bagues), des armes (pointes de flèche, poignards) et des pièces d'harnachement (mors, branches de mors, éperons), des monnaies, des figurines anthropomorphes et zoomorphes, des pots à protomes zoomorphes etc.

Il est à remarquer l'absence ou la rareté extrême de certains types de pièces, comme les outils agricoles ou les outils utilisés pour traiter le bois et la pierre, des matières abondantes dans la région, le nombre impressionnant de couteaux, des pièces liées au filage et au tissage, (fusaïoles, poids en argile, aiguilles), ornements ou accessoires vestimentaires. Les moulins du type hellénistique et romain, entiers ou fragmentaires, déposés à l'intérieur des rings, sont relativement

[27] Sîrbu, Matei, Dupoï 2005, 71, fig. 7/1, 3-4; 9; 62.

[28] Sîrbu, Matei, Dupoï 2005, 71-72, fig. 18; 35/1; 36/1-2; 63.

[29] Sîrbu, Matei, Dupoï 2005, 72, fig. 7/1-4; 36/2; 63/2-3.

[30] Sîrbu, Matei, Dupoï 2005, 77-78, fig. 15/6; 19; 71-72.

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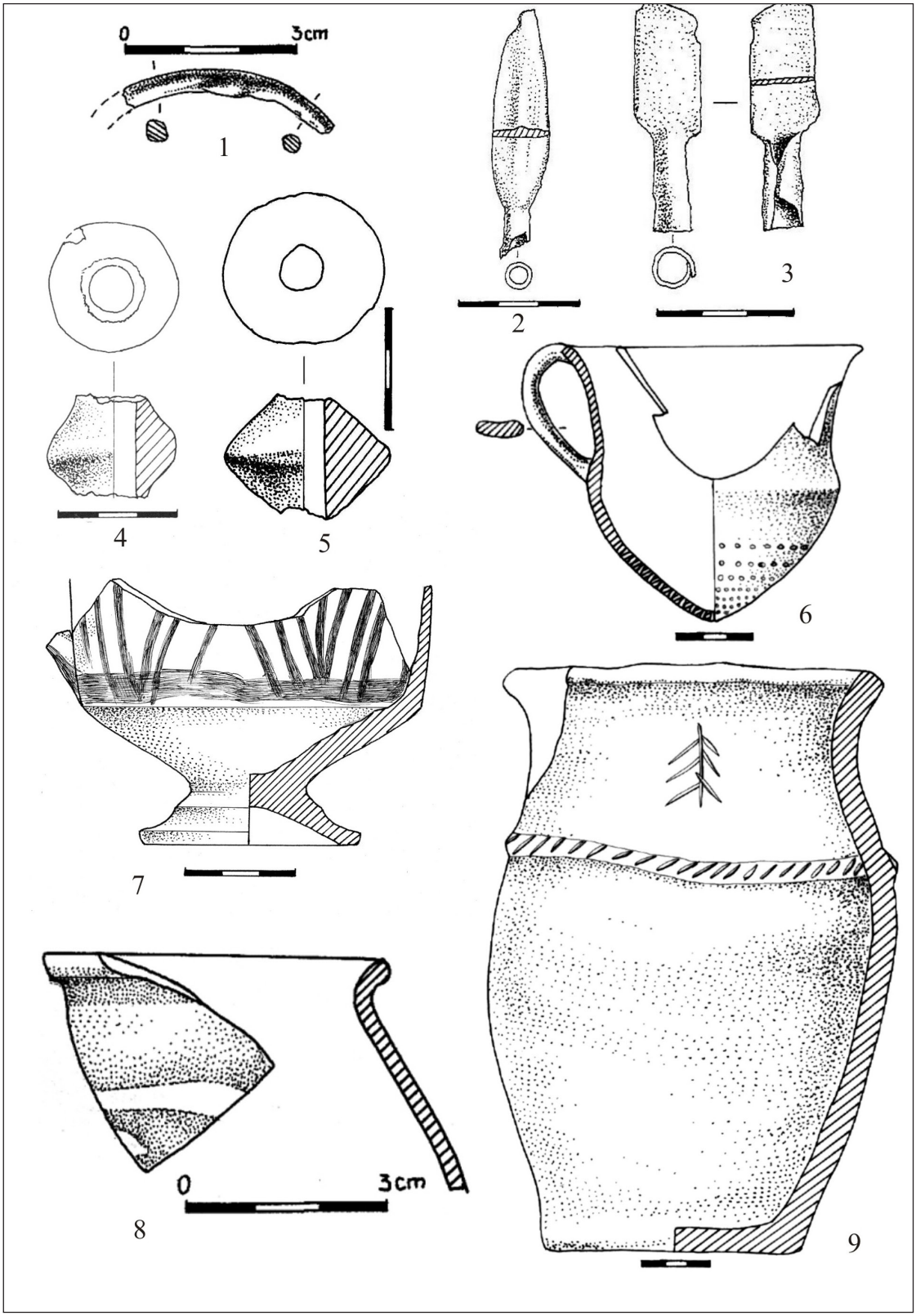

Fig. 12. Pietroasa Mică – *Gruiu Dării* – pièces du complexe 21 (*apud* Sîrbu, Matei, Dupoï 2005).

nombreux, ce qui pourrait suggérer des rituels agraires.

Les fouilles archéologiques récentes ont révélé que les dépôts votifs s'étendaient également à l'extérieur de l'enceinte. La *Terrasse 1* est localisée à 100 m à l'est du plateau et à 50 m plus en bas, comme différence de niveau, entourant le massif vers le sud, sur environ 300 m de long. Les fouilles faites en 2006-2009 ont révélé une dimension inattendue du site de *Gruiu Dării*, une grandeur insoupçonnée des dépôts votifs daces.

À la suite des recherches on peut démontrer que sur la *Terrasse 1* (Fig. 15), au moins pour le premier siècle ap. J.-C., on avait fait des dépôts votifs

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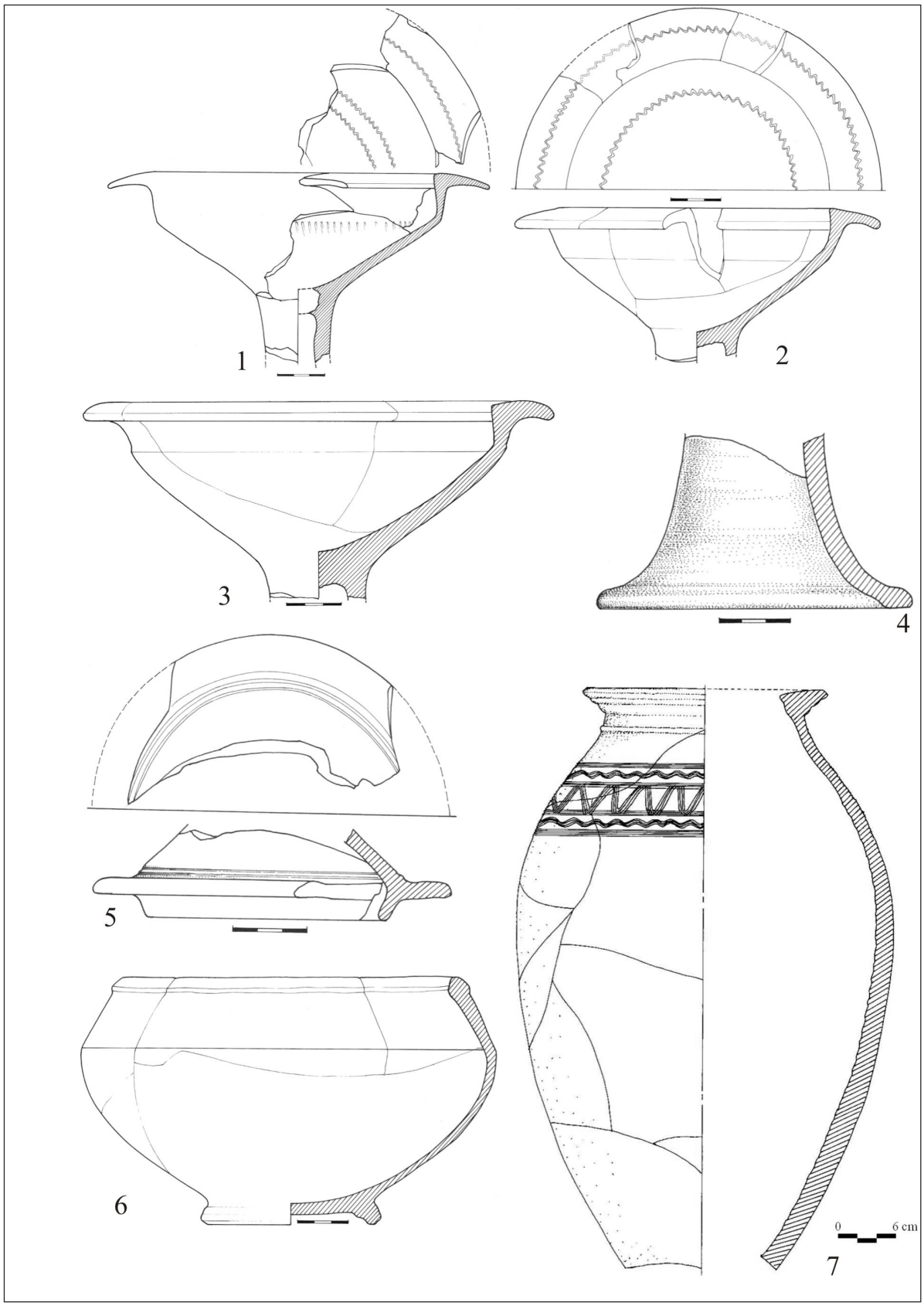

Fig. 13. Pietroasa Mică – *Gruiu Dării* – pièces du complexe 45 (*apud* Sîrbu, Matei, Dupoï 2005).

similaires à ceux trouvés aux niveaux supérieurs du *Plateau*. Nous constatons, de nouveau, que l'on ne peut pas parler de structures classiques d'habitation ou associées aux activités artisanales[31].

Bien que similaires aux complexes du *Plateau*, ceux de la *Terrasse 1* conservent leur individualité par certaines particularités.

Les types de complexes datant du I^er^ s. ap. J.-C. indiquent qu'il ne peut y être question d'un éta-

[31] Sîrbu, Matei 2007, fig. 17; Sîrbu *et alii* 2009, 174; 2010, 143-144.

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blissement fortifié où cité. D'ailleurs, la répartition des dépôts datant du Ier s. ap. J.-C., qui occupaient toute la superficie, prouve qu'il n y avait pas de place pour les habitations.

L'analyse du contenu des dépôts du type petite butte suggère que l'on y apportait des restes calcinés de quelques demeures, ainsi qu'une partie de leur inventaire, précédé d'une sélection, parce que certaines catégories de pièces manquent, alors que d'autres sont nombreuses. En outre, il faut souligner la place importante que le feu avait dans les rituels effectués ici, fait prouvé par les nombreux foyers découverts.

Le dépôt d'un mobilier riche et varié, composé généralement d'artefacts déjà utilisés, souvent des pièces à haute valeur intrinsèque ou d'usage courant, exprime une forte motivation cultuelle, autrement il serait difficile à comprendre pourquoi on renonçait à ces biens. Néanmoins, il faut préciser que l'on n'a pas trouvé de trésors de pièces de monnaie ou d'orfèvrerie, de « dépôts » d'autres types de pièces non plus. Seul l'ensemble des pièces y déposées, par leur nombre et valeur, peut être considéré comme un « dépôt ». On peut apprécier qu'il y ait des preuves concluantes pour affirmer qu'il y avait ici une enceinte sacrée de premier ordre (*temenos*).

Qui étaient les destinataires de ces rituels? L'emplacement sur un plateau, la forme presque circulaire de la plupart des dépôts et le grand nombre de foyers pourraient suggérer l'adoration du soleil ou d'autres cultes dans lesquels le soleil avait un rôle important, tels les cultes agraires. Mais il est aussi possible que ce fussent des croyances liées au culte de la maison, et cela peut expliquer la présence, dans les dépôts, des fragments de parois de maisons et d'une partie de leur mobilier, auxquels on doit ajouter les nombreux rituels effectués autour des nombreux foyers.

Il est hors de doute que, par la monumentalité, la richesse et la variété des types de pièces trouvées dans les dépôts votifs, *Gruiu Dării* a été un important centre de culte des Daces, unique jusqu'à présent, par sa forme de manifestation.

La fortification[32]

Il serait difficile de parler de la fortification, autant à cause de son mauvais état, que du stade de la recherche.

Il n'existe actuellement que des parties de la fortification sur les côtés Nord et Ouest (Fig. 1), puisque les côtés est et sud ont été totalement détruits par l'exploitation du calcaire et les écroulements. Mais sur les côtés ouest et nord, elle a subi, le long du temps de nombreuses destructions, en premier lieu à cause de ceux qui ont enlevé les dalles des parements.

Néanmoins, quelques-unes de ses caractéristiques sont certaines, dont nous rappelons l'existence d'une muraille avec des influences hellénistique (deux parements en blocs de calcaire et emplecton) (Fig. 1), ainsi que les deux phases générales de construction. Il est également sûr que cette fortification existait autant au Ier s. av. J.-C., lorsqu'il y avait une citadelle, qu'au Ier s. ap. J.-C., lorsqu'il y avait une enceinte sacrée[33].

Les fouilles archéologiques ont relevé le fait que les deux phases de la fortification ont, outre les éléments communs, une série de caractéristiques spécifiques, selon la situation concrète de chaque zone. Ainsi, la fortification a été, sur le côté Ouest-Nord-Est, croisée en deux endroits, avec ici même, de petites différences.

Pour la première phase, on avait nettoyé le sol jusqu'au rocher, taillé par endroits pour obtenir une superficie au plus plane; on a mis, ensuite, une couche de terre gris-jaunâtre, 20-30 cm d'épais, relativement propre, dure, dans le but d'obtenir un terrain horizontal et adhérent à la fondation du rempart (Fig. 1/2). Du moment que l'on n'a pas identifié de fossé de fondation creusé dans le rocher, on peut conclure que la base de la muraille a été mise en terre à une certaine hauteur. Cela était une muraille à deux parements et emplecton, ce qui est visible dans certains endroits tout comme les dalles restées après le démantèlement.

Pour élever le rempart de la seconde phase, on avait nivelé les débris de la première phase de la fortification, où il y avait autant de grosses pierres que des dalles de calcaire, ensuite on avait déposé une couche épaisse de terre (15-20 cm), où il y avait des fragments de vases daciques, puis deux rangées de pierres massives de calcaire. La fondation de la nouvelle muraille ne suivait plus exactement le trajet de la première, le parement extérieur étant plus à l'intérieur, mais s'appuyant partiellement sur celui-ci. C'est un rempart à deux parements en blocs de calcaire sommairement taillés à l'extérieur, 2,00-2,20 m de large; dans une zone où il est le mieux conservé, huit assises sur 1,20 m de haut, les blocs de la base étaient mis l'un sur l'autre, tandis que dans la partie haute, on a observé la tendance de la lier et d'utiliser des pierres de réglage (Fig. 1/2). Un sédiment blanc

[32] Voir, Sîrbu, Matei 2013 (un article concernant la fortification).

[33] Sîrbu, Matei, Dupoï 2005, 13-15, fig. 1-2; 3/1; Sîrbu, Matei 2007, 155-156, fig. 5; Sîrbu *et alii* 2012, 104; 2013, 104.

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a servi pour liant. L'emplecton consiste en pierres petites et moyennes de calcaire, plus rarement de grès rougeâtre, et lœss pour liant. Pas de structure en bois.

Ils ont dû chercher d'autres solutions pour la fortification sur le côté nord, en raison d'une situation différente du terrain. Aux âges Énéolithique et du Bronze, il y avait une pente douce, car on y a découvert, dans la zone restée intacte, autant de couches archéologiques, que des complexes d'habitation datant de ces deux périodes. Les Géto-Daces y avaient entrepris d'amples travaux, pour accentuer la pente ainsi que pour la consolider en vue d'une meilleure stabilité de la muraille. Puisque la base de la muraille ne s'appuyait aucunement sur le rocher, il a fallu creuser un fossé pour la fondation.

De la première phase de la muraille, il reste, d'habitude, la fondation en pierres non-taillées, plus, en deux-trois cas, une ou deux rangées d'assises du parement intérieur. La fondation consistait en blocs irréguliers de calcaire, grands et moyens; les marges verticales attestent l'existence du fossé, même si sa forme n'est pas toujours saisie dans le terrain. Vu que la muraille de la seconde phase la superposait toujours, nous n'avons pas sa largeur précise, car nous ne l'avons pas démontée; nous pouvons seulement dire qu'elle était visible, dans la zone Nord-Ouest, sur 1,60-1,80 m de large, ensuite était superposée de la seconde phase de la fortification. Dans toutes les sections fouillées dans l'enceinte, près de la muraille, nous avons remarqué, à des distances de 3,00-3,50 m, de grandes fosses, avec des pierres sur les bords, qui témoignent de l'existence des poteaux, donc d'une structure solide de fixation. Vers l'extérieur, là où les Daces avaient créé une pente abrupte, on a identifié des structures de consolidation compliquées, autant sous la forme de remblayages que des murailles d'appui. Dans toutes les superficies fouillées sur le côté nord, on a identifié des traces visibles de feu, sous la forme de poutres brûlées ou des débris du feu, tandis que sur la pente, jusqu'à la base, des restes de poutres brûlées et charbon, ce qui témoigne de l'existence d'une construction solide en bois.

La muraille de la seconde phase avait la même structure et les mêmes dimensions que sur le côté Ouest-Nord-Ouest, à la seule différence que le lœss servait comme liant aux parements, et que l'emplecton contenait autant du lœss rouge-brique, que des débris brûlés provenus des habitations néolithiques, bouleversées lors de l'aménagement de la pente. On n'a pas identifié de traces de quelque structure en bois. La muraille de la seconde phase superposait, dans des proportions différentes, celle de la première phase; ainsi, pendant que dans la partie occidentale, il y avait un plus grand décalage entre leurs bords, dans la partie orientale, elles se superposaient presque.

Chronologie

La stratigraphie, les complexes et les matériels archéologiques découverts nous offrent des données importantes sur la datation des deux phases, bien que certaines incertitudes de détails existent encore. Dans plusieurs cas, les dalles ont été enlevées jusqu'à la base, aussi le rapport stratigraphique entre l'intérieur de l'enceinte et l'élévation des murailles a-t-il été affecté.

On a constaté que, sur le côté Nord, on avait trouvé, par endroits, dans le terrain pour la fondation de la muraille, première phase, des fragments céramiques daciques typiques à la fin du II^{e}-début du I^{er} s. av. J.-C., ce qui témoigne de l'existence antérieure d'un établissement non-fortifié. Il est bien probable que la muraille de la première phase a été élevée dans le premier quart du I^{er} s. av. J.-C.

Dans cette situation, nous considérons que la citadelle de *Gruiu Dării* est la plus ancienne à gauche du Danube où on avait appliqué des techniques hellénistique de construction, des parements en dalles et emplecton ; tous ces éléments (position, superficie, murailles) argumentent que c'est une citadelle et non pas un établissement fortifié[34].

Pour la seconde phase la situation est plus claire; on a fait, au-dessus des ruines et du nivellement de la muraille de la première phase, des nivellements avec du lœss ou une couche de calcaire menu, issu probablement de la taille des blocs pour les parements, à 0,60 -0,70 m de profond, tandis qu'au dessus de ceux-ci il n'y avait que des dépôts rituels du type petite butte et des foyers, avec un mobilier qui se date seulement au I^{er} s. ap. J.-C. Il en résulte que la muraille de la seconde phase avait été élevée, le plus probablement, au commencement du premier siècle de l'âge chrétien.

Considérations finales

L'enceinte de plateau Gruiu Dării

Dans presque toutes les zones fouillées dans l'enceinte on a fait des découvertes datant des IV^{e} -III^{e} s. av. J.-C., mais la couche archéologique et les complexes n'apparaissent que sur certaines superficies, ce qui témoigne d'une habitation de petite ampleur; de toute façon, ils ont tous les

[34] Antonescu 1984; Glodariu 1983.

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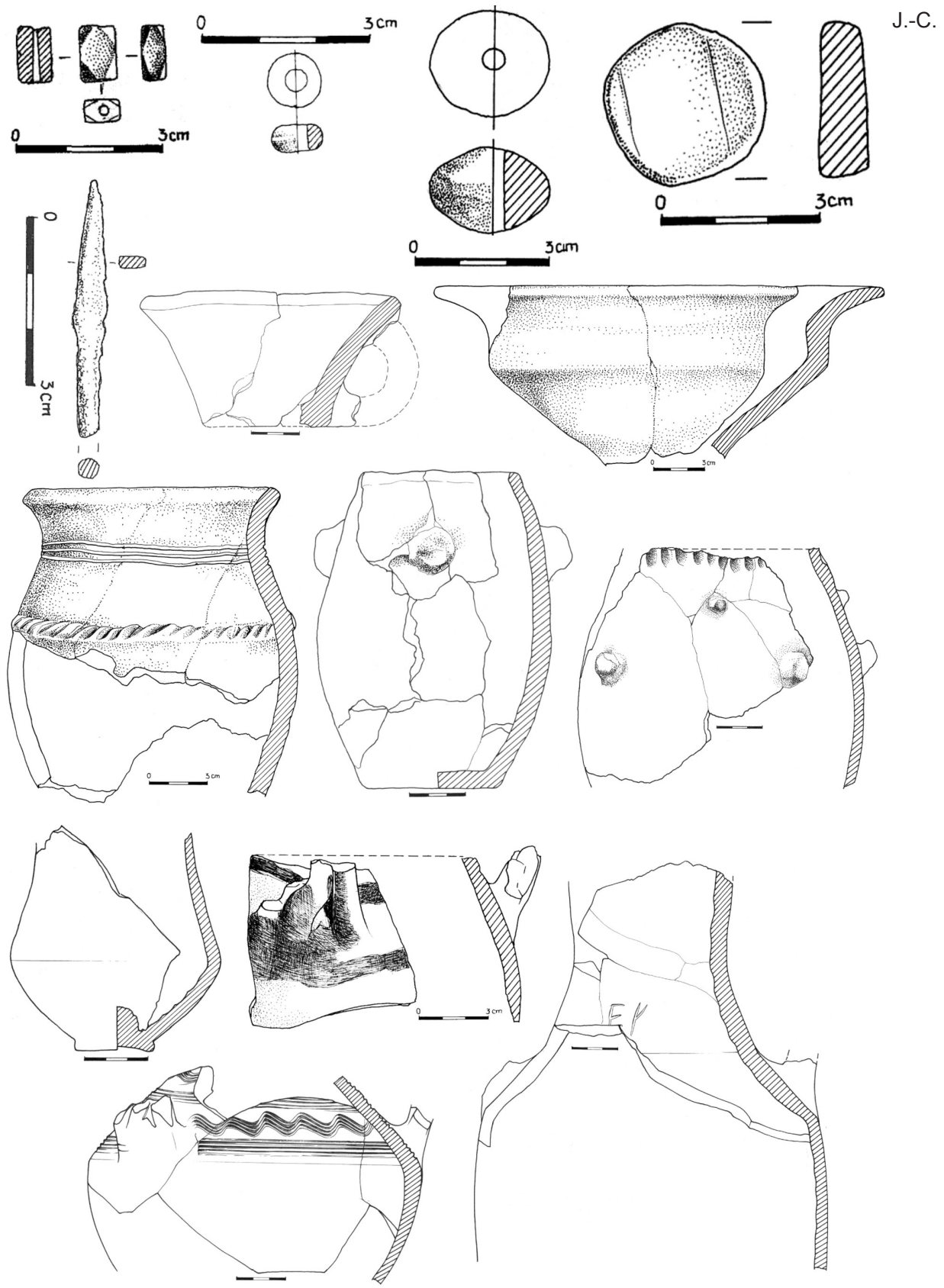

Fig. 14. Pietroasa Mică – *Gruiu Dării* – pièces du complexe 45 (*apud* Sîrbu, Matei, Dupoï 2005).

éléments caractéristiques à un établissement non-fortifiés.

On n'a pas découvert, jusqu'à présent, de vestiges qui soient datés fin du III^{e}-première moitié du II^{e} s. av. J.-C., il y avait, dans toutes les zones du *Plateau*, des complexes d'habitation et annexes ménagères, avec

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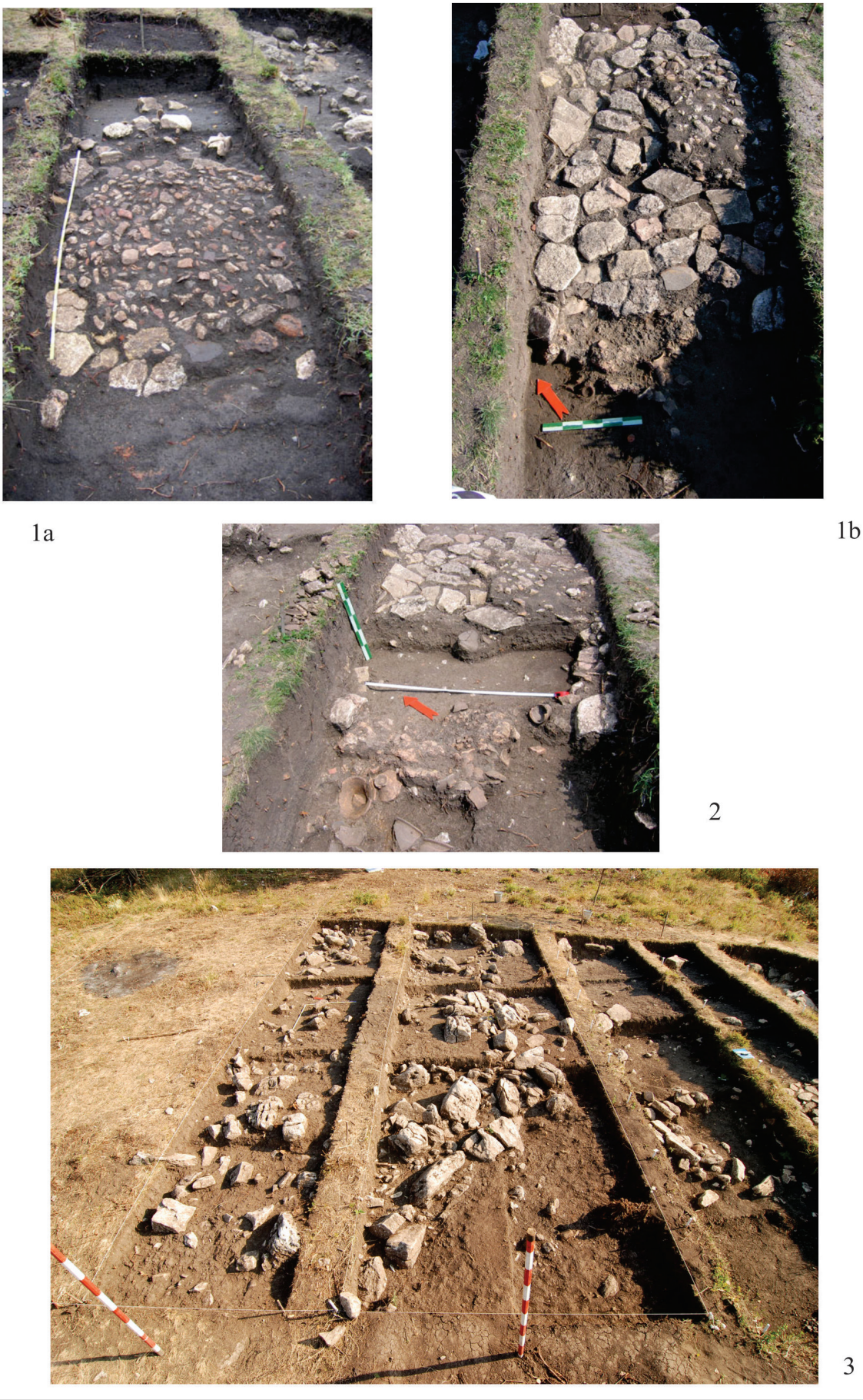

Fig. 15. Pietroasa Mică – *Gruiu Dării*. Terrasse 1. 1a-b complexe 2006; 2 complexes 206 et 201; 3 vue générale.

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matériel caractéristique, typiques pour un établissement non-fortifié.

Probablement, dans le premier quart du Ier s. av. J.-C., le *Plateau* était entouré d'une muraille du type hellénistique, avec des parements en blocs de calcaire sommairement taillés, des complexes d'habitation et artefacts typiques pour une citadelle.

Au seuil entre les deux ères, plus probablement vers le commencement du premier siècle de l'ère chrétienne, la muraille est détruite, laissant de fortes traces de feu, ensuite elle est reconstruite. A l'intérieur de l'enceinte il n'y avait pas de vestiges, datant du Ier s. ap. J.-C., caractéristiques pour une citadelle ou un établissement (demeures, annexes ménagères, ateliers), mais seulement des dépôts du type petite butte, la plupart avec des rings de pierres, souvent des foyers *in situ*, plus de nombreuses et variées catégories d'artefacts qui suggèrent une certaine sélectivité, ensuite des foyers isolés. Tout cela témoigne de l'utilisation de l'espace comme une enceinte sacrée.

Les matériels archéologiques datés le long du IIIe s. av. J.-C.-Ier s. ap. J.-C. sont similaires à ceux des autres sites contemporains, tels ceux de Brad[35], Grădiştea[36], Răcătău[37] ou Poiana[38]; néanmoins, on y remarque une certaine sélectivité du mobilier dans la période où il y avait une enceinte sacrée.

Étant donné que les dépôts votifs en question ont constitué le sujet de plusieurs approches[39] et qu'il n'y a plus de découvertes qui imposent d'autres points de vue, nous ne les analyserons plus dans la présente étude.

Nous nous bornons à mentionner le fait que ce lieu de culte, bien que différent quant à la modalité pratique de faire des dépôts votifs, fait partie de la catégorie des centres régionaux de culte géto-daces, comme ceux de Băneşti-*Dealul Domnii*[40], Ocniţa-Ocnele Mari[41] et Moigrad-*Măgura Moigradului*[42].

Ceux-ci constituent une catégorie distincte de sanctuaires et lieux de culte découverts dans le monde des Géto-Daces, identifiés à présent dans une plus grande variété de types que l'on ne croyait jadis[43].

[35] Ursachi 1995.

[36] Sîrbu 1996.

[37] Căpitanu 1986-1987, 103-213.

[38] Vulpe, Teodor 2003.

[39] Sîrbu 2004, 183-214; 2006a, 39-42; 2006b, 843-856; 2009, 45-52; Sîrbu, Matei, Dupoï 2005; Sîrbu, Matei 2007, 155-182.

[40] Sîrbu, Peneş 2011, 437-457.

[41] Berciu 1981; Berciu, Iosifaru, Diaconescu 1993, 149-156.

[42] Macrea, Rusu, Mitrofan 1962, 485-502; Matei, Pop 2001, 253-277.

[43] Vulpe, Popescu 1976, 217-226; Vulpe 1986, 101-111; Conovici, Trohani 1988, 205-217; Crişan 1993; Domaradzki 1994, 69-108; Sanie 1995; Sîrbu 1993; 1994, 39-59; 2006a, 21-86; 2006b, 843-856; Sîrbu, Ştefan, Duţescu 2007, 183-211.

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LE MONDE ILLYRIEN DANS L'ŒUVRE DE JULES CÉSAR « *SUR LA GUERRE CIVILE* » : APOLLONIA

NERMIN BASHA

Mots-clés : la guerre civile romaine, Grecs, Romains, Illyriens à la Mer Adriatique, histoire culturelle, histoire militaire, histoire économique, géographie humaine.

Résumé : L'article présente les données comprises dans les relations de Jules César sur la guerre civile (*De bello civili*), qu'il a menée contre Pompée, dans le Sud de l'Albanie actuelle. L'auteur de l'article accorde une attention particulière à la ville d'Apollonia et à ses environs. Les faits historiques et de géographie physique et humaine concernant les Illyriens et les Grecs anciens sur la côte de la mer Adriatique sont puisés non seulement dans l'œuvre de César, mais dans les écrits des autres auteurs romans de l'époque. La présentation s'appuie aussi sur les informations comprises dans les travaux des auteurs modernes tels Fr. Pouqueville et G. J. von Hahn, C. Patsch et Milan Šufflay, afin de marquer la persistance et la survivance d'une série de caractéristiques et d'aspects divers.

Cuvinte cheie: războiul civil roman, greci, romani şi illiri pe ţărmul Adriaticii, istorie culturală, istorie militară, istorie economică, geografie umană.

Rezumat: Articolul prezintă datele cuprinse în relatările lui Iulius Cezar despre războiul civil (*De bello civili*), pe care l-a dus contra lui Pompei, în sudul Albaniei actuale. O atenţie specială este acordată cetăţii greceşti Apollonia şi împrejurimilor sale locuite de triburile illire. Faptele de istorie, de geografie fizică şi umană referitoare la illiri şi la grecii antici de pe ţărmurile Adriaticei sunt exceptate nu numai din opera lui Cezar, ci şi din scrieri ale altor autori latini din epocă. Autoarea se sprijină şi pe informaţiile cuprinse în lucrările autorilor moderni, cum sunt Fr. Pouqueville, G. von Hahn, C. Patsch sau M. Šufflay, pentru a evidenţia persistenţa şi supravieţuirea unei serii de caracteristici şi aspecte.

Comme les désaccords, qui avaient surgi depuis plusieurs années, n'ont pas pu être résolus par des négociations entre le Sénat Romain et Pompée, d'une part, et César, d'autre part, le conflit armé a éclaté, connu dans l'histoire comme la « *guerre civile* ». César lui-même, brièvement, mais clairement, a présenté les événements qui se sont produits dans le travail qu'il a appelé « *Commentarii* » (notes, commentaires), composé de trois livres, respectivement 87, 44 et 112 chapitres. Les conflits non résolus, transformés en hostilité ouverte entre les deux plus grandes figures politiques et de l'armée romaine, ont mené à une confrontation féroce, en l'an 48 av. J.-C. César se trouvant en Gaule, qu`il avait soumise et qui avait retrouvé la paix après une guerre de dix ans. Déclaré « *ennemi de la patrie* » par le Sénat romain, il surmonte la petite rivière Rubicon (Fiume Marecchia aujourd'hui), séparant la frontière entre l'Italie et la Gaule, et, avec une poignée d'hommes de son armée, est pénétré en Italie, dont la population l'a accepté sans se battre. En apprenant cette nouvelle, Pompée et le Sénat se hâtent de quitter Rome, arrivent à Brindisi et, de là, traversèrent de l'autre côté de l'Adriatique, visant Dyrrachium (ou Dyrrachium-Durrës), où ils avaient rassemblé tout l'arsenal de la guerre. Sans perdre de temps César suivit son adversaire, qui était bien armé et bien équipé. Échappant à la surveillance et à la garde de la flotte de Pompée, situé à Corfou, César débarqua ses troupes sur la côte épirote de l'Albanie d'aujourd'hui, dans une zone rocheuse et difficile à Himara, Palasë (Palaeste) ; avec la vitesse qui caractérise toutes ses actions, il a envahi le port d'Orikum, celui d'Apollonia et Durrës étant menacés. Ici ont eu lieu deux batailles, César n'a pas pu envahir Durrës, par contre il n'est pas sorti victorieux, mais il ne c'est pas rendu. Après cela, il s'est installé dans la région entre Durrës et Apollonia. Les deux adversaires ont fait des territoires illyriens la scène de leurs actions théâtrales ; les noms des montagnes, des rivières, des ports, des villes, des tribus, et même ceux des céréales pour préparer le

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pain et beaucoup d'autres, viennent directement nommés ou sous-entendus dans le troisième livre de l'œuvre de César.

Dès le moment de son débarquement sur la côte épirote, l'intérêt de l'écriture césarienne pour la science d'*illyrologie*, en particulier, et celle albanologique en général, augmente parce que César, même si frugal, nous a quand même donné une matière précieuse pour l'histoire ancienne des nos territoires.

Par conséquent, de notre point de vue, le livre III des œuvres de César est à considérer comme un matériel précieux albanologique pour compléter l'histoire ancienne de notre pays.

Dans 67 des 112 chapitres du troisième livre de la « *Guerre civile* », nous y trouverons annoncées directement ou implicitement des noms de villes, d'endroits, de tribus, de montagnes, de terres, de fleuves d'Illyrie et de l' Épire à l'époque du développement des événements. À travers une présentation trop courte de l'auteur, nous pouvons nous informer sur l'attitude de la population face aux commandants romains, sur l'état des routes et de la circulation, en général, de l'état des champs et de leur production, sur la densité de la population, la végétation du pays, l'élevage et d'autres nombreuses informations.

Dans cette présentation, nous nous arrêterons seulement à la mention du nom de la ville Apollonia (aujourd'hui village de Pojan) ; les sujets seront enrichis et complétés avec les écrits d'autres auteurs, avant et après César. L'auteur a mentionné 9 fois le nom Apollonia, concrètement dans les chapitres suivants : 5, 11, 12, 13, 26, 30, 75, 78, 79. Nous nous arrêtons à quelques extraits de certains de ces chapitres. La traduction du passage où nous trouvons la mention de César sera donnée complète, tandis que, au bas de la page, le passage au latin :

Chapitre 5 *- ... (Pompée) avait décidé d'hiverner sur Dyrrachium, sur Apollonia et toutes les autres villes côtières, afin d'empêcher César de traverser la mer et, par conséquent, il avait dispersé la flotte sur toute la côte*[1] *...*

Après Dyrrachium (Durrës, aujourd'hui), une autre ville où Pompée avait décidé d'hiverner était Apollonia, et cela, dans un but bien étudié de sa part. Apollonia, « *habitation anciennement connu de la science et de la sagesse, où tous venaient pour se consulter...* »[2], ainsi que Dyrrachium, était le théâtre de la guerre entre les deux romains puissants de l'époque. Elle appartient au groupe des villes les plus importantes de l'époque des événements, fondée en 558 av. J.-C., or, selon d'autres données, vers l'an 600 av. J.-C. Même si, en fait, Apollonia, fondé beaucoup plus tôt par les résidents Pélasges, se dit « *avoir été agrandie et embellie par des colons venus de Corinthe et Corfou* ». En passant par la zone côtière, en descendant sous la ville de Dyrrachium, « *suivent la rivière d'Aps et Aos, sur lequel c'est construite Apollonia, une ville ayant de très bonnes lois, construite par les Corinthiens et les habitants de Corfou ; cette ville est situé à 10 stades (178 m) de la rivière et à soixante stades de la mer* »[3]. Apollonia, donc, était une colonie, construite dans l'enchaînement de la tradition que les Grecs de l'Antiquité ont créé depuis le VIII^{ème} siècle av. J.-C., d'établir une colonie commerciale dans de nombreux centres côtiers de la Méditerranée et de la Mer Noire. Ces colonies grecques ont été établies près de zones habitées par la population locale, comme le prouve, entre autres, le mur qui entoure la muraille de la ville, mur qui, dans certaines parties, était la suite des fondements de la muraille qui appartient à un début ancien d'habitation au commencement du premier millénaire, avant l'installation des colonies hellénistique. La région d'Apollonia était habitée par la population illyrienne, quand est venu et c'est installé là un groupe de 200 « *colons* » grecs de Corinthe et de Corfou[4]. Son nom était fixé par les colons. Apollon a été considéré comme le défenseur des colons. Donc, apparemment, ils l'ont nommé comme le dieu. Il y avait plus de 30 villes anciennes de ce nom, et notre ville était distinguée en lui attribuant un qualificatif « *Apollonia d'Illyrie* » ou « *Apollonia Ionienne* » ou « *Apollonia d'Épire* ». De nombreux événements et de différentes armées ont été perçus par Apollonia et sa population, qui ont été sous leur emprise, même de passage. Les rois macédoniens ont toujours convoité les villes côtières de l'Illyrie, de cette sorte même l'Apollonia. En 314 av. J.-C., l'armée du roi macédonien, Cassandre, a envahi Apollonia, mais, après deux ans, grâce à la révolte des habitants d'Apollonia, aidés par leurs voisins les Illyriens, il fut contraint de la quitter. Encore une fois les habitants d'Apollonia font face à un autre

[1] *Hiemare Dyrrachii, Apolloniae omnibusque oppidis maritimis constituerat, ut mare transire Caesarem prohiberet, eiusque rei causa omni ora maritima classem disposuerat.* Cesare, *De bello civili,* liber tertius, Milano 1938, 27.

[2] Pouqueville 1999, 84.

[3] Strabonis, *Geographica,* VII, 8 (*εἶθ' ὁ Ἄψος ποταμὸς καὶ ὁ Ἄωος, ἐφ' Ἀπολλονία πόλις εὐνομωτάτη κτίσμα Κορινθίων καὶ Κερκυραίων, τοῦ ποταμοῦ μὲν ἀπέχουσα σταδίους δέκα, τῆς θαλάττης δὲ ἑξήκοντα).*

[4] Demiraj 2008, 97.

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roi macédonien, Philippe, pour protéger leur liberté et nous trouvons aujourd'hui une information de Tite-Live, aux termes duquel : « *Philippe a dévasté les terres des habitants d'Apollonia et, à mesure qu'il s'approchait des murs, a invité les Romains à la guerre* »[5]. Après avoir battu Hannibal en 201 av. J.-C., les Romains se tournèrent vers Philippe II de Macédoine et ont décidé de l'attaquer de l'Illyrie. En l'automne 200 av. J.-C., deux légions sont descendues sur Apollonia et se sont installées près de la rivière Aps. C'est à partir d'ici qu'ils ont lancé une attaque contre les positions de Philippe à Dassareti[6]. En plus, c'était exactement le consul Sulpice, lequel avait établi son campement entre Apollonia et Dyrrachium, sur les côtes de la rivière Aps. Constamment la zone entre ces deux villes avait servi de point de débarquement pour les armées romaines. En 229 av. J.-C., à l'époque de la guerre Illyrienne-romaine, Apollonia avait pris le parti des Romains. Plus tard, au printemps de l'an 168 av. J.-C., Ap. Claude avait introduit dans son armée de troupes supplétives recrutées chez les habitants de Bylis, d'Apollonia et de Dyrrachium, remarque qui nous est parvenue de Tite-Live[7]. En suite, le Préteur Anici, nommé à remplacer Ap. Claude, arrive à Apollonia, il rejoint l'armée sur les bords de la rivière Genus et y ajoute des troupes supplétives parthines (tribu Illyrien) qu'il amenait déjà avec lui, 2.000 soldats à pied, (commandés par Epicade, titulaire d'un nom local) et 200 cavaliers[8]. Avant et au cours de cette période historique, de nombreuses armées atterrirent et campèrent sur ces terres, particulièrement dans la zone entre Dyrrachium et Apollonia pour continuer, en suite, à l'intérieur de l'Illyrie, de l'Épire pour aller vers la Thessalie, la Macédoine etc. Ces armées errantes, et avec eux les marchands d'esclaves et des marchandises, créèrent plus de revenus et de la prospérité pour ces villes et les zones environnantes. La ville a grandi et s'est développée comme une grande ville avec une superficie totale de plus de 130 hectares, grâce à la proximité de la mer, grâce à la position à côté des deux rivières, grâce à ses richesses, grâce à ses pâturages et ses terres nombreuses et fertiles. Pline écrit que dans la terre d'Apollonia on peut y trouver le minéral bitume ou il y a aussi un mélange naturel goudron-asphalte, de l'asphalte et du goudron venant de terres d'Apollonia[9]. Eliani élargit encore son représentation sur cette richesse : « *Les habitants d'Apollonia résident une ville voisine d'Epidamnos, sur le golfe Ionien. Dans de nombreux endroits à proximité d'Apollonia nous pouvons voir des mines de bitume, lequel est extrait du sol par creusement; est aussi il y a plein de ressources d'eau. Pas loin brille un feu éternel. Mais la colline qui brûle n'est pas grande, elle a un cercle étroit; l'odeur de sulfure et d'alun est présente et aux environs il y a un verdoiement et des plantes qui se développent sans cesse; le feu sortant activement à proximité, ne nuit pas ni à la germination des plantes ni au verdoiement ; selon les habitants d'Apollonia, le feu ne cesse de brûler jour et nuit...* »[10]. Ce feu a continué à brûler sans interruption ; le témoignage récent est donné par l'historien Dion Cassius [11]. En outre, à proximité on y organisait de temps en temps des jeux de sport et des fêtes sportives, où il y avait des athlètes venant des pays voisins. Plusieurs années plus tard, en 1806, Pouqueville a mis pied sur ce beau pays prospère « *lequel comprend une partie de l'ancien territoire d'Apollonia et des mines ou des couches connues de bitume, qui remplace toutes les résines végétales. Les couches de bitume se trouvent dans l'angle formé par la décharge de la rivière Shushica sur la rivière Vjosa, à sa gauche ou vers la partie sud. Les couches bitumineuses semblent se situer à une distance considérable*

[5] T. Livii, *Ab Urbe condita*, XXIX, 12 (*Philippus agros Apolloniatium uastauit et ad urbem admotis copiis potestatem pugnae Romano fecit).*

[6] *Historia,* 2002, 127.

[7] *Ibidem*, tomus quintus, libri XLIV, caput XXVI, Bassani 1778, 37 (*Jam Ap. Claudius, adsumptis ad eum exercitum quem habebat, Bulinorum et Apolloniatium et Dyrrhachinorum auxiliis, profectus ex hibernis circa Genusum amnem castra habebat.* – Désormais Ap. Claude, joignant à son armée des troupes complémentaires recrutées chez les habitants de Bylis, d'Apollonia et de Dyrrachium, a quitté ses positions hivernales pour s'approcher aux terrains près de la rivière Genus).

[8] Cabanes, Drini 1995, 42.

[9] C. Plini Secundi 1965, 199.

[10] Claudii Aeliani, *Varia historia*, XIII, 16 « *Apolloniatae finitimam Epidamno urbem in situ ionico positam incolunt, & ex propinquis locis bituminis fodinae conspiciuntur, quod e terra erumpens eodem modo, quo pleriq; fontium, locum replet. Non longis immoratalis ignis elucet. Est autem exiguus quidam collis ardens, no admodum altus, circuitu no magno, qui sulphur, & alumen redolet. Circa ipsum floridae arbores, & pleriq; virides, a, quibus germinantibus, & iam adultis ignis noctu, & interdiu sine ulla intermissione ardens abstinet* » Claude Eliani a vécu de l'an 170 jusqu'à l'an 235 ap. J.-C. De l'œuvre cité nous sont arrivés 17 livres, tandis que son autre œuvre s'intitule *De animalium natura* ; les deux ont de l'importance pour nous, car elles contiennent des informations intéressantes sur la flore et la faune de l'Illyrie, sur la richesse en bitume d'Apollonia, sur des coutumes des Illyriens, etc.

[11] Dionis Cassii Cocceiani 1965, 273. L'auteur donne cette description de Nympheum d'Apollonia, que les archéologues d'aujourd'hui localisent à côté du village Frakulla de nos jours: « *Ce qui m'étonne le plus de tout autre chose c'est le grand feu qui jaillit à côté de la rivière Ana, lequel ne se propage pas plus que sur la terre autour et ne la brûle pas, ne brûle pas mais par contre là, en grande proximité, il y a un verdoiement et des plantes qui fleurissent ; à part cela, quand il pleut, ce feu s'anime et monte plus haut. Pour cette raison cet endroit s'appelle Nympheum et il y a eu ici un oracle* ».

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vers le sud-est et peuvent avoir de telles réserves pour fournir toute l'Europe ... Les gens de ces régions réclament que, presque nuit, ils regardent des scintillements sur la surface de la terre - les circonstances qui ont été signalés par Aristote et d'autres écrivains de l'antiquité, pour s'adresser à Nympheum décrites par Plutarque dans son œuvre dédié à la vie de Saule. Aux environs d'Apollonia (six miles au sud-est), se situe Nympheum, un lieu sacré, où des scintillements de feu apparaissent maintes et maintes fois, sans consommer la végétation au milieu de la vallée verte et les pâturages »[12].

Deux siècles après la mise sur pied, la ville a pris forme avec des murs environnants, l'acropole, l'académie, la chapelle, le théâtre, avec des appartements de gens riches, avec des promenades ornées de monuments, avec sa propre monnaie et les relations commerciales et culturelles qu'elle a eues avec l'Attique et les territoires italiques ; elle est devenu un centre important pour les études de l'architecture, de la sculpture, de la rhétorique et de la philosophie, où venaient aussi les jeunes de l'aristocratie romaine. Tous ces bâtiments et ces monuments, hardis et harmonisés par l'architecture, donnaient à Apollonia un rare éclat qui la distinguait des autres. Cicéron l'appelle « *la grande et majestueuse ville* »[13], « *ville aux lois merveilleuses* » tellement développés que, « *quand les guerres civiles terminèrent, afin de former l'âme de ce garçon particulier (Octave Auguste) en sciences libérales, (César) l'a envoyé dans les écoles d'Apollonia pour les études* »[14]. Cette information, à part Velleius Paterculus, nous est donnée par Suétone quand il parle de la vie des empereurs, en nous faisant connaître l'Apollonia de l'époque en raison des développements qu'elle avait eus. Nous apprenons davantage sur cette ville comme un centre majeur de l'enseignement scientifique dans antiquité, un fait pour lequel parle aussi la position de César, l'homme le plus puissant de l'époque, lequel, son neveu, son successeur désigné au pouvoir, l'envoie à l'Apollonia de l'Illyrie, pour poursuivre ses études. « *César envoya Octave à l'avance vers Apollonia pour qu'il s'adonne aux études* ». Et non seulement cela, car Octave « *a dédié à la langue et à la littérature grecque une attention non négligeable, ayant d'importants succès ici. Son enseignant de stylistique et l'éloquence grecque était Apollodore de Pergame, lequel quand il était encore un jeune garçon, bien qu'Apollodore était à un âge avancé, le prit avec lui quand il partit de Rome vers Apollonia ... Pendant le séjour solitaire à Apollonia, un jour, accompagné d'Agrippa, il est entré à l'observatoire de l'astrologue Théogène* »[15]. C'est dans cette même ville que se trouvait Octave, fils de sa sœur adopté par César, quand celui-ci tombait à Rome sous le coup des 23 couteaux des conjurés. Apollonia (réduite aujourd'hui au village de Pojan) près de l'embouchure de la rivière Seman, était compétitive de Durrës ; ce centre d'études, à laquelle Rome a donné des pédagogues renommés et cultivés, et où le jeune Octave a étudié ici la rhétorique.[16] Une description d'Apollonia a été fournie par Pouqueville, lequel écrit que de l'autre côté de la rivière il y avait un assez grand village de Fier et un mile à l'Ouest il y avait le monastère Vierge Pollinie, la terre de l'ancienne Apollonia, la seule habitée de cette région, une fois sacrée pour Apollon. « *On y voit les monuments de la ville, mis en place par Apollon, à la limite de la Mer Ionienne* ». Ainsi, selon Pausanias, fut l'inscription de lettres antiques gravées sur le piédestal de la statue du dieu de la journée. Une église entourée de quelques cellules, caractéristique des monastères, et toute enfermée de murs, adaptée à douze moines, prouve aujourd'hui l'ancienne Apollonia une grande et honorable ville, préférée de Jules César et l'endroit pour l'éducation de son grand neveu, Auguste. Dans l'espace ci-dessus occupé par Apollonia, nous y retrouvons des signes tels que : colonnes brisées, des fresques et des lettres majuscules, des briques où on retrouve le nombre de ces légions romaines, qui les ont écrites ... Dans une hauteur voisine est une colonne unique de style dorique. C'est la seule partie qui reste d'un temple ... Parmi les ruines de cette construction, en l'an 1813, on y découvrit la statue de Diane et quelques années plus tard, au même endroit, on a découvert un bas-relief représentant Apollon assis dans un chariot tiré par des chevaux, tableau présenté par Pussini dans une de ses peintures. Dans les ruines de cette ville on trouve un certain nombre de médailles, presque toutes portant la tête d'Apollon, les cornes ornées de raisins et de feuilles de vigne. On a trouvé

[12] Pouqueville 1999, 77.

[13] Ciceronis 26 *(... qui tenet Apolloniam, magnam urbem et gravem ...)*.

[14] C. Velleius Paterculus, *Historiae romanae*, liber posterior, caput 59 (*Et patratis bellis civilibus ad erudiendum liberalibus disciplinis singularis indolem iuvenis Apolloniam eum in studio miserat...*) Velleius Paterculus est représentant de la littérature à la cour impériale. Il est né à Capua autour de l'an 19 av. J.-C. et mourut après l'an 31 ap. J.-C. Il a écrit l'œuvre « Histoire romaine » en deux tomes; dans cette œuvre nous trouvons des informations sur la guerre des Illyriens du Nord contre l'envahissement romain, particulièrement, sur les révoltes des années 6-9 ap. J.-C.

[15] C. Svetoni Tranquilli 1965, 214-215.

[16] Baldacci 1929, 226.

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des ornements semblables représentant Apollon avec sa lyre[17]. Selon Prashniker et Schobert, une fouille à Apollonia promet beaucoup de succès. À la différence de Dyrrachium, qui a été habité sans interruption et les témoignages de l'antiquité y sont mélangés presque constamment, Apollonia a été abandonné à la fin de la période antique. Mais selon ces archéologues, dans les villages de Pojan et Sop, devrait y avoir de nombreuses preuves de bâtiments de toutes les époques de l'antiquité, car la ville a joué un rôle important tout au long de l'Antiquité, depuis sa fondation, et, à l'époque impériale, il continue à s'épanouir en tant que ville universitaire fréquentée par beaucoup des jeunes romains[18].

Vlora servait à Apollonia comme un grand port maritime. Apollonia, étant en liaison étroite avec (Corcyre) Corfou et Durrës et en contact avec Bylis et Amantia, exclusivement aristocratiques, est devenu le centre spirituel de nombreuses colonies hellénistique de l'Est et du Sud, pour lesquelles nous racontent aujourd'hui beaucoup de ruines et seulement quelques noms[19]. Même cette ville offrait beaucoup de prospérité et de confort à Pompée, mais surtout elle était près de la côte, comme tous les ports et les estuaires, que Pompée tenait fanatiquement dans ses mains pour ne pas admettre à César d`y descendre.

Chapitre 11 *- Après avoir présenté les propositions de César en présence des commandants de la flotte à Corcyre, Vibule pensait qu'il était très nécessaire de proclamer à Pompée l'arrivée soudaine de César, afin qu'il puisse prendre les mesures appropriées à cette condition, avant de commencer l'évaluation des propositions de paix; par conséquent, voyageant jour et nuit changeant les bêtes de voyage (mulets) dans toutes les villes pour avoir plus de rapidité, il se dirigea vers Pompée pour lui annoncer que César était proche. A cette époque Pompée était à Candavie et de la Macédoine, il se dirigeait vers Apollonia et Dyrrachium, vers les habitations hivernales. Mais, troublé par ces nouvelles surprenantes, il a essayé d'arriver à Apollonia avec accélération, afin d'empêcher à César d'envahir les villes côtières*[20].

Chapitre 12 *– Comme il s'empare d'Orikum, sans aucun retard, César part vers Apollonia. Luc Staber, qui commandait ici, se hâta d'envoyer l'eau dans la forteresse, à le fortifier et il a exigé des otages aux habitants d'Apollonia. Mais les habitants (d'Apollonia) lui ont répondu qu'ils n'auraient pas donné des otages, qu'ils n'auraient pas fermé la porte au nez au consul, et qu'ils ne prendraient pas des décisions différentes de toute l'Italie et du peuple romain. Apprenant leur volonté, Staber est sorti furtivement d'Apollonia. Les habitants d'Apollonia envoient des représentants à César et l'attendent aux portes de la ville. Leur exemple est suivi par les habitants de Bylis, d'Amantia, d'autres villes proches et par l'Épire entier, envoyant des représentants à César, l'assurent de leur soutien*[21].

Avant la guerre avec Teuta, Rome ne possédait rien de réel en Illyrie. Mais avant la Première Guerre Punique, Apollonia avait demandé la protection de Rome. Puisque en l'année 264 av. J.-C., deux sénateurs romains, Fabrici et Aproni, avaient insulté l'ambassadeur d'Apollonia envoyé à Rome, le Sénat les a envoyés comme deux criminels aux habitants d'Apollonia, afin que la ville leur donne la punition qu'elle jugerait adéquate. Mais, indépendamment de la punition, Apollonia a servi un bon accueil aux sénateurs romains et les a renvoyés avec beaucoup d'honneurs. Dans l'an 228 av. J.-C., les Romains avaient conquis et occupèrent en Illyrie un territoire considérable, entre autres, Apollonia, Dyrrachium, Lissus.

A ce moment des événements, en l'an 48 av. J.-C., l'Illyrie était tombé sous la domination romaine, les régions illyriennes servaient, entre autres, pour recruter des troupes. Comme César, Pompée aussi a essayé de gagner le soutien des garnisons installées là bas, ainsi que le support de la population locale, ce qui lui aurait permis de combler les

[17] Pouqueville 1999, 83-84.

[18] Praschniker, Schober 1919, 71. Dans la même page les deux auteurs notent qu'à la vallée de Kryegjatë, Leake a vu les ruines d'un temple ionien, anéanties complètement par Ibrahim Pasha qui, au début du XIX^{ème} siècle, a prélevé d'ici 70 chariots de matière rocheuse et les a envoyés à Berat pour y construire ses nouveaux sérails.

[19] Šufflay 2004, 6.

[20] Cesare, *De bello civili*, Milano 1938, 36 : « *Vibullius, his expositis, non minus necessarium esse existimavit de repentino adventu Caesaris Pompeium fieri certiorem, uti ad id consilium capere posset, ante quam de mandatis agi inciperetur, atque ideo continuato nocte ac die itinere atque omnibus oppidis mutatis ad celeritatem iumentis ad Pompeium contendit, ut adesse Caesarem nuntiaret. Pompeius erat eo tempore in Candavia iterque ex Macedonia in hiberna Apolloniam Dyrrachiumque habebat. Sed re nova perturbatus maioribus itineribus Apolloniam petere coepit, ne Caesar orae maritimae civitates occuparet ...* »

[21] *Ibidem*, 38 : « *Recepto Caesar Orico nulla interposita mora Apollonian proficiscitur. Eius adventu auditu Luc Staberius, qui ibi praeerat, aquam comportare in arcem atque eam munire obsidesque ab Apolloniatibus exigere coepit. Illi vero daturos se negare neque portas consuli praeclusuros neque sibi iudicium sumpturos contra, atque omnis Italia iudicavisset. Quorum cognita voluntate clam profugit Apollonia Staberius. Illi ad Caesarem legatos mittunt oppidoque recipiunt. Hos sequuntur Byllidenses, Amantini et reliquae finitimae civitates totaque Epirus et legatis as Caesarem missis, quae imperaret, facturos pollicentur* ».

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rangs de ses troupes de l'armée, et aurait servit de base pour des fournitures militaires. Orikum, port « forestier » des Akrokeraune[22] à la fin de la rade de Vlora était très fréquenté par les Grecs avant, et les Romains plus tard. La conquête par les Romains suit *à* celle par Philippe V en 214 av. J.-C. À Orikum, Aemilius Paullus a embarqué son armée vers l'Italie en 167 av. J.-C. César posséda Orikum lors de sa marche en l'an 48 av. J.-C. de Paleste (aujourd'hui Palace) vers la rivière d'Aos et ici aussi César a désarmé sa flotte dans la lutte contre Pompée; la région est célèbre pour les bois de construction[23]. César posséda Orikum sans combattre, parce qu'il fut soutenu par la garnison, et les habitants. D'Orikum, où il a passé que quelques heures, César partit rapidement en direction d'Apollonia, se trouvant à la distance de 55 km. L'accélération fut liée au désir et à l'intention du grand stratège de prendre possession de la grande ville d'Apollonia par une attaque surprise. Toujours Apollonia et ses champs ont été les points stratégiques importants, l'endroit par lequel les armées étrangères sont entrées dans les territoires illyriens, entre autres pour passer même dans les pays voisins. Tite-Live, dans une partie de son travail, nous informe : « *Avec eux, P. Licini est venu à Brindisi auprès de l'armée, et à partir de là, avec toutes les forces, transporté vers Nympheum, a installé les tentes au sol d'Apollonia* »[24]. Même la flotte pouvait rester près de la côte d'Apollonia, parce qu'à cette époque la rivière Aos (aujourd'hui Vjosa) était plus proche d'Apollonia. Encore une fois Tite-Live nous informe : « *Ensemble avec la flotte se trouvait près de la rive, pas très loin de Apollonia* »[25]. Même à l'époque de nos événements, César connaissait l'importance de cette ville, même de toute la région. C'est pourquoi, après une marche extraordinaire, à travers un chemin difficile à surmonter, traversant des montagnes qui limitent la côte et la baie d'Aulona (aujourd'hui Vlorë), sans se reposer deux nuits, César aurait laissé – selon l`opinion de quelques savants les troupes se détendre une nuit et les aurait immédiatement mis sur la nouvelle marche, dans un champ occupé par les inondations d'hiver, y compris les difficultés de traverser une rivière. Même s'il pourrait envahir facilement la ville d'Apollonia, comme c'est déjà arrivé, César était encore loin de ce qu'il visait. Après Apollonia, devant lui il y avait la marche vers Dyrrachium. César ne perdit pas de temps, voire que la rapidité de ses actions demeure l'une des principales raisons de ses victoires; sans tarder, à travers les rues pleines de boue et inondées de l'hiver, avec des marches quotidiennes dans les rues en terrain léger et après le passage de la rivière Aos, il se précipite vers la zone la plus importante pour toutes les guerres en Albanie qui révèle, de ses contrastes, tout le caractère de l'ensemble du pays, vers la ville riche et commerciale d'Apollonia, avec sa partie haute qui se dresse sur les deux collines, avec ses murs, ses sanctuaires et son port en plein essor[26], se dirige vers l'Apollonia, dite de Corinthe, qui est situé dans un bel endroit de la terre et de la mer, dans une très belle espace de rivières[27], qui devrait être atteint au bout de deux jours. Ceci est cohérent avec la façon dont nous lisons ci-dessous, parce que le travail fait par le commandant de Pompée en forteresse et sur les murs ne prenait pas plus de deux jours. Comme on peut lire dans ce chapitre, à l'approche de César d'Apollonia, le commandant de Pompée, Staber conduit de l'eau vers l'« *arx* », donc vers la forteresse, qui était le lieu approprié pour la protection et la fortifie. Grâce à cette présentation, nous apprenons que même à l'époque de César, la ville se composait d'une partie supérieure, plus petite et d'une partie inférieure basse, plus large. C'est exactement dans la partie supérieure que se trouvait l'Acropole, le plus haut sommet de la ville, convenant à la protection. Jusqu'à ce moment cette forteresse, dans sa majeure partie, était couverte d'œuvres d'art[28]. Vers le milieu du XIX^{ème} siècle, en 1854, Apollonia fut visité par Hahn, tandis qu'en 1876-1877, nous avons la mission conduite par Léon Heuzey, Daumet et les notes d'A. Gillieron. Heuzey a consacré une seule journée à sa visite sur le site d'Apollonia et une partie de ce temps il l'a consacré à la collecte de sculptures pour le musée du Louvre[29]. Gil-

[22] Patsch 1904, 22, ces montagnes n'étaient pas seulement riches en arbres différents, mais aussi en l'an 1900 prospérait d'animaux. À travers son journal intime, il nous transmet que « *le bétail à Akrokeraune y est varié. Partout il y a des cerfs, des chèvres sauvages. En grand nombre il y a des chacals, des loups et des cochons. Il y a des lièvres, pigeons sauvages, des bécasses, et des canes sauvages, et dans les zones basses il y a de grands troupeaux de moutons et de chèvres* ».

[23] Baldacci 1929, 402.

[24] T. Livii, *Ab Urbe condita*, tomus quartus, libri XLII, caput XXXIX, Bassani MDCCLXXVIII, 403 (*Cum iis P. Licinius Brundisium ad exercitum, atque inde cum omnibus copiis transvectus ad Nympheum, in Apolloniati agro posuit castra).*

[25] *Idem*, tomus quintus, libri XLIV, caput XXVI, Bassani MDCCLXXVIII, 38 (*Tum classis ad oram haud procul Apollonia staba).*

[26] Veith 1942, 62.

[27] Dionis Cassi Cocceiani, *Histoire romaine* në « Ilirët dhe Iliria tek autorët antikë », libri XLI, kreu 44, Tiranë 1965, 73.

[28] Veith 1942, 33.

[29] Cabanes, Drini 1995, 14. En juin de l'an 1900, après le voyage fait dans l'Albanie de l'époque, Carl Patsch, dans son œuvre *Das Sandschak Berat in Albanien - Le sandjak de Berat en Albanie*, Vienne 1904, Archive de l'Institut de l'Histoire, Tirana, page 34, écrit que le mois même il avait eu l'occasion de voir les sculptures d'Apollonia, qui se trouvent au musée du Louvre.

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lieron fournit une description d'Apollonia, où, entre autres, il dit avoir vu la colonne Stouladi (Shtyllas) « *une grande colonne à part, 7 m de hauteur et un chapiteau dorique, plus âgé que celui de Parthénon* »[30].

Pour les grandes richesses archéologiques qu'elle conserve, Apollonia pourrait être appelé le Pompée d'Albanie. Situé dans un paysage qui a peu changé depuis l'antiquité, Apollonia fascine avec la combinaison des monuments avec la nature vierge, en nous attirant pour des heures après 2000 ans dans une ambiance de détente et de méditation[31].

La première fouille archéologique véritable à Apollonia a été faite en 1916[32], par une unité militaire sous la direction de l'archéologue autrichien Praschniker, lequel, beaucoup d'objets trouvés par lui-même ou conservés à travers les siècles par les paysans, les a transportés dans le musée de Vienne. Les fouilles ont mis au jour des oeuvres d'art de cette ville ; l'agora, datant du IV^{ème} siècle av. J.-C., construite selon le style grec : un carré ouvert, avec des colonnes et le sol, entouré de boutiques et de bâtiments publics, ouvert dans la partie ouest, ce qui donne une vue magnifique sur le champ de Myzeqe jusqu'à la Mer Adriatique. En 1924, le Français Léon Rey poursuivit les fouilles, faisant des découvertes authentiques et très importantes : de grandes maisons, sept niches (cabine, cavité) du grand porche, plus tard, sept autres encore du porche et de nombreuses statues de la période impériale, des bas-reliefs, l'odéon, le petit sanctuaire, le gymnase et de nombreuses parties du mur d'enceinte. Cinq générations d'archéologues ont consacré plus d'un siècle à Apollonia. Qu'est-ce qu'ils ont trouvé n'est pas plus que 5% de la superficie de la ville antique et il semble que le proverbe latin « *ars longa, vita brevis* » s'adapte parfaitement à Apollonia[33].

Il paraît que la partie supérieure de la ville, laquelle avait conservé la population autochtone dans la plupart, aurait du avoir beaucoup d'eau dans les puits, parce que c'était l'hiver, donc, période de pluies ; mais cette population, appuyant César, comme il nous le dit lui-même, a gardé une attitude hostile et n'a pas soutenu, ni aidé Staber de Pompée, lequel fut forcé de fuir secrètement d'Apollonia. Ayant trouvé la ville d'Apollonia aussi aimable, que celle d'Orikum laquelle fut devenue la sienne « *l'épée dans le fourreau* »[34], César a rassemblé l'armée et a rappelé à ses soldats que, grâce à la vitesse, ils avaient traversé la mer dans la tempête, avait pris sans se battre deux villes, qui appartenaient à l'ennemi, qui n'avait toujours pas de nouvelles de leur arrivée. « *Pour cette raison, dit-il, si nous voulons aussi prendre en main* Dyrrachium*, qui est l'entrepôt de Pompée, tout sera entre nos mains, tout ce qu'il a accumulé tout au long de l'été en munitions et en nourriture* »[35]. Les habitants d'Apollonia ont gardé une attitude amicale, non seulement pour le consul romain en l'an 48 av. J.-C., donc Jules César, mais même après sa mort; comme on le sait, le fils adoptif de César, Octave Auguste, se trouvait à Apollonia pour ses études au moment de l'assassinat de César ; les habitants d'Apollonia ont eu une attitude amicale envers Octave Auguste, successeur et héritier de César, en le priant même de rester dans leur ville, jusqu'à ce que la situation s'apaise à Rome. Nicolas de Damas, qui a vécu quelque temps à la cour impériale d'Auguste, nous a laissé cette notification sur les habitants d'Apollonia : « *Les habitants d'Apollonia, tous ensemble, priaient à César (Octave Auguste) avec bienveillance de rester avec eux un certain temps, lui promettant de mettre à son service leur ville pour tout, de l'amour et du respect pour les morts (Jules César). Mais César ... n'as pas renoncé à son opinion et a déclaré qu'il se rendrait à travers la mer pour être proche aux événements. A ce moment il a rendu hommage aux habitants d'Apollonia et, quand il est venu au pouvoir, leurs a donné la liberté et les a exclus des obligations. En outre, il a apporté de nombreux autres bienfaits et a rendu leur ville une des plus heureuses. Puis, quand il a dû quitter la ville, toute la population l'a salué les larmes aux yeux, admirant son bon comportement et sa sagesse pendant ce court séjour dans leur ville, maudissant le sort en même temps* »[36].

Chapitre 13 *– ... Quand il a vu que Pompée arrivait avant lui à* Dyrrachium*, César fait arrêter la marche et fait installer le camp près de la rivière*

[30] Cabanes, Drini 1995, 14.

[31] Ceka 2005, 7; Prachniker, Schober 1919, 69, décrivent de cette façon le paysage merveilleux de la position d'Apollonia: « Le paysage d'Apollonia laisse des traces remarquables. De ses couleurs et de ses lignes, on a l'impression d'être en Grèce. La douce suite des collines, des champs marron avec des groupements séparés d'arbres, la mer profonde où se distinguent l'île rocheuse de Sazan et les montagnes de la péninsule Akrokéraune. Pas loin, le baie de Vlora, où l'on peut compter les navires italiennes. On ajoute à tout cela la richesse en trésors antiques ».

[32] Ceka 2006, 133.

[33] Appiano Alessandrino, *Delle guerre civili de Romani,* In Vinegi A, appresso Camillo Franceschini 1575, 79.

[34] *Ibidem.*

[35] *Ibidem.*

[36] Damascensi 1965, 174. Nicolas de Damas originaire de Syrie a vécu quelque temps à la cour impériale d'Auguste. Son œuvre, une histoire universelle, composé de 144 livres, ne nous est pas parvenue complète, mais fragmenté.

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Aps, à la frontière des habitants d'Apollonia, afin de protéger, avec des forteresses et des gardes de corps, les populations qui méritaient sa défense; également il a décidé d'attendre ici les autres légions venant d'Italie et de passer l'hiver sous les tentes. Pompée a fait la même chose, après avoir installé le camp de l'autre côté de la rivière Aps, faisait arriver toutes les troupes et les forces supplétives[37].

Chapitre 75 *– Ainsi, sans perdre de temps, il a assuré les malades et les blessés, à la nuit tombante, dans un silence complet, César fit sortir du camp et a acheminé vers Apollonia tous les bagages, sous l'ordre impératif de ne pas s'arrêter un instant jusqu'à l'achèvement du voyage*[38].

Dans le match entre deux adversaires dans le domaine de Dyrrachium, César a perdu, mais il ne c'est pas fait démonter. Mieux que le gagnant (Pompée), le défait (César) a évalué les conditions et les circonstances qui ont causé la défaite. A ce point sa seule tâche était de protéger et de veiller à la voie choisie pour le retrait des troupes vers Apollonia. La perte lui avait donné une vision plus claire de la situation et lui avait dicté un nouveau plan de guerre. Heuzey pense d'abord que César aurait pensé à une délocalisation de la guerre à Apollonia et aux alentours. Mais ces territoires épuisés depuis longtemps, séparées de l'Italie par la mer, qui était en faveur de l'ennemi, ne pouvaient être considérées comme une base sûre d'opérations, il devrait être content que les circonstances l'obligeaient de chercher un autre endroit[39]. Avec l'habileté et la vitesse du général qui sait comment s'orienter, même dans les situations les plus difficiles, il a fait sortir tous les bagages du camp, chargés sur des chars et des bêtes de charge, et les a envoyé vers Apollonia, afin que les soldats soient soulagés des poids le plus possible ; cela servait à la marche rapide et à la création d'une plus grande distance possible de Pompée, lequel sûrement lui courrait après, dans le but de « *surprendre sur la route les hommes de César terrifiés* ». Plus tard, César fit sortir de toutes les portes du camp en peu de temps la plupart de l'armée et immédiatement sortit lui-même accompagné de son arrière-garde composée de deux légions et de la cavalerie. A cet instant furent donnés les signaux communs pour le mouvement du camp, ce qui a servi au mieux à la préservation du régime militaire et à la couverture du départ de l'armée césarienne contre l'ennemi, le moment où la marche ne pouvait plus être cachée[40]. Pompée n'as pas pu suivre César, parce que ses troupes étaient éparpillés à cause de divers problèmes après la bataille; en plus, grâce à l'action rapide et intelligente de César, un grand avantage fut créé, environ 14 km ; cela a persuadé Pompée que ses légions ne pouvaient pas atteindre les troupes de César en retraite, c'est pourquoi il a fait envoyer la cavalerie, laquelle a attrapé l'arrière-garde de César, quand celle-là avait exactement passé la rivière Genus (aujourd'hui Shkumbin) et avaient pris position au pied des collines, protégeant le passage, puisque la rivière se surmontait avec difficulté, dans le camp près d'Asparagus. Au bout de trois jours, avec une distance de 16 km de César et de la rivière Genus entre les deux, Pompée fut obligé d'abandonner la poursuite. La fin de la poursuite de l'armée de Pompée après celle césarienne n'était pas une mince victoire de César. La vitesse et la discipline étrange de ce retrait de César de Dyrrachium vers Apollonia montre sa grande capacité stratégique.

Une autre chose qui attire l'attention dans ce chapitre est l'expression « *des malades et des blessés* » ; on sous-entend que les blessés étaient ceux qui ont subi des blessures lors du combat advenu ou lors du retrait, présentés dans les chapitres précédents. Et les malades ? Les chercheurs croient qu'au moins une partie de ces patients sont des soldats malades de fièvre paludéenne. Les scènes de guerre entre les Romains ont lieu sur la côte ou dans les zones proches de la côte jusqu'à l'instant où nous sommes arrivés. Ces zones, principalement celles de Dyrrachium à Apollonia, sont des zones de grands fleuves et avec beaucoup d'eau, lesquels inondent souvent, changent de direction, créant de grandes surfaces d'eau stagnante et des marais, pleins de cannes de jonc (des plantes), les meilleures conditions pour l'existence du paludisme. Que le paludisme a fait des ravages dans de nombreuses formes dans la Méditerranée antique, cella est revendiquée par de nombreux documents. À Rome la déesse « *Febris* » avait depuis des temps très anciens une chapelle sur la colline du Palatin. Cicéron lui-même dans un de ses ouvrages nous montre clairement deux types de cette maladie. Chez Pline nous trouvons des

[37] Cesare, *De bello civili,* Milan 1938, 38. ... *Caesar, praeoccupato itinere ad Dyrrachium, finem properandi facit castraque ad flumen Apsum ponit in finibus Apolloniatium, ut castellis vigiliisque bene meritae civitates tutae essent, ibique reliquarum ex Italia legionum adventum expectare et sub pellibus hiemare constituit. Hoc idem Pompeius fecit et trans flumen Apsum positis castris eo copias auxiliaque conduxit.*

[38] *Ibidem*, 118. *Itaque nulla interposita mora sauciorum modo et aegrorum habita ratione impedimenta omnia silentio prima nocte ex castris Apolloniam praemisit ac conquiescere ante iter confectum vetuit ...*

[39] Heuzey 1886, 91.

[40] Veith 1942, 160.

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rapports d'un autre type de la maladie. La côte Illyrienne, en particulier Myzeqe, où se trouvait Apollonia, était remplie de ces eaux. Hahn aussi a fait une description de cette zone et de son climat malsain. Toute la région, selon lui, semble avoir été formée par les rivières qui la traversent (Vjosa, Seman, Shkumbin, Darçi, Leshniqe, Erzen, Ishmi, Mat, Drin et Buna), lesquels évoluent constamment pour le faire augmenter. Cela nous est montré par la suite de marais, entourant plus ou moins le bord de la mer et les onglets de terre qui vont profondément dans la mer. Celles-ci se créent par des déchets déposés par les rivières au niveau de leur embouchure, c'est pur cela que cette bordure se développe rapidement et change la forme après chaque orage[41].

Le paludisme fait un massacre ici à la fin de l'été[42]. Les villes dans cette région, grâce au niveau élevé de leur culture, auront lutté longtemps contre ce terrible ennemi. Apollonia était une ville bien réputée pour sa culture ; même chose pour Dyrrachium, les deux avaient atteint un haut degré de développement, en raison de leur importance en tant que ports de commerce. Pendant la campagne de César, ses troupes, qui ont agi et campé dans les zones de plaine et près des territoires de marais, ont souffert de cette maladie, et les troupes qui ont campé dans les zones les plus élevées, non[43]. Que l'armée de César ait souffert de cette maladie se laisse clairement entendre dans ce chapitre. Dans le chapitre 87, Labien, ancien commandant, une fois un ami et un camarade très proche, collaborateur de César, au moment où ont lieu nos événements rejoint Pompée et rappelle au conseil militaire de Pompée que « *beaucoup de soldats furent anéantis par l'épidémie d'automne en Italie* », nous rappelant que cette épidémie existait aussi au pays près de l'Italie à cette époque. « *L'Albanie est situé au bord de la mer, dans les vallées et les pleines intérieures d'où on peut voir la mer Adriatique, un endroit nocif pour la santé ; dans les plaines fertiles, dans les roches dures des montagnes à une hauteur considérable au-dessus du niveau de la mer, sur les plages agréables environnant les villes, ainsi que dans des zones désertes, la fièvre est encore une des forces terribles pour tuer dans ce malheureux pays* »[44]. Le paludisme faisait des dégâts dans l'armée et dans la population. Les villes anciennes qui n'avaient pas des conditions nécessaires à la vie ont disparu rapidement[45]. Apollonia est mentionné pour la dernière fois sous l'empereur Justinien, dans le catalogue des villes d'Héraclites. Un peu plus tard, elle s'est effondrée en raison de l'augmentation des zones humides... Ses habitants ont rempli les petites villes qui se trouvaient dans le voisinage[46].

« *Aujourd'hui Apollonia est une ville morte, couverte par quelques mètres de terre laquelle a longtemps servi de carrière pour la construction de belles maisons de Berat* … »[47] parce que les marais et le « mauvais air » ont provoqué une fuite de la population et une migration vers d'autres régions. La protection d'Auguste, ni la connaissance des institutions n'ont pas pu la sauver et rien n'a été laissé pour reconnaître quoi que ce soit «la somptueuse et la magnifique Apollonia », la voisine du pays des Taulants, dont le nom est estropié comme les bâtiments[48].

Chapitre 78 *– César a dû aller à Apollonia pour installer les blessés, distribuer les salaires des soldats, afin d'encourager les alliés et d'établir des garnisons défensives près de chez eux*[49] *...*

Dans ce chapitre, César dit qu'il faut aller sur «*Apollonia pour installer les blessés et distribuer les salaires des soldats* ». Il n'avait pas reçu de

[41] von Hahn 1854, 2003, 21. Dans le même œuvre, page 109, indiquant la position de Durrës et pensant que la matière emmenée par les eaux de l'antiquité et parvenue à transformer l'île des époques anciennes en une péninsule, Hahn pense que le champ sableux qui connecte la péninsule à la terre est très peu élevée de la mer ; aussi bien, ce champ, au pieds des collines est tellement basse, que l'eau des pluies et de la mer en période d'orage et de grand vent entre par ici et ne peut plus sortir. L'eau dormant pendant l'hiver crée une suite de marais, qui sèchent en été et enlèvent des mauvaises odeurs pour la ville et ses alentours. Donc, continue Hahn, puisque la situation se présente ainsi, il ne faut pas s'étonner que le paludisme a son centre à Durrës et que surtout en automne il est très dangereux.

[42] *Ibidem*, 109.

[43] Veith 1942, 61. Concernant le paludisme à l'époque de ses observations sur place, cet auteur dans la page 17 écrits : « *Si l'hiver albanais avec ses pluies intenses, avec ses inondations et consécutivement des pannes de circulation, empêche toute activité humaine, en saison d'été, toutes ses obstacles disparaissent et fait l'apparition un nouvel ennemi, encore plus horrible: le paludisme. Le paludisme est endémique et se propage sur tout le pays. Lors de son voyage en 1914, continue Weith, j'ai noté que l'infection commençait dans la zone de Vlora autour de la moitié d'avril et à Durres 2-3 semaines plus tard* ». Carl Patsch aussi, dans son étude *Das Sandschak Berat in Albanien*, Vienne 1904, chapitre 9, Archive de l'Institut de l'Histoire, Tirana, p. 4, décrivant certaines des rivières d'Albanie comme: Mat, Ishmi, Erzeni, Shkumbini, Seman, Vjosa, dit qu'ils déchargent de grandes quantités de matériel qui pèse, ils poussent les deltas dans la mer, les remplissent de matériaux et créent de cette façon des baies de marais, pleins de paludisme.

[44] Baldacci 1929, 33.

[45] Šufflay 2004, 9.

[46] *Ibidem,* 10.

[47] Cabanes, Drini 1995, 9.

[48] *Ibidem,* 11.

[49] Cesare 1938, 121 : « *Caesari ad saucos deponendos, stipendium exercitui dandum, socios confirmandos, praesidium urbibus re-linquendum necesse erat adire Apolloniam ...* ».

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l'Italie des approvisionnements alimentaires, afin de pouvoir faire monter sur le petit nombre de navires une plus grande quantité de soldats; plus tard, il a pensé à apporter à manger et des céréales pour l'armée, mais bloqué par la flotte de Pompée, lui furent brûlés par les hommes de Pompée les quelques navires de charge. Il a été donc été obligé de se fournir uniquement à l'endroit où il se trouvait. César mentionne les salaires des soldats, lesquelles se distribuaient à des périodes appropriées de paix. Naît la question : César avait-il emmené (ou Pompée, qui, dès le début de la guerre civile, possédait la ville la plus importante, Apollonia) des dinars pour les énormes coûts financiers de la guerre, qui comprenaient entre autres le paiement des salaires des soldats ? Nous pensons que la réponse à cette question réside dans l'étude de deux trésors découverts sous le sol à la périphérie de la capitale : l'un composé de 63 morceaux, parmi lesquels 39 sont des dinars, donc des pièces de monnaie de la période de la république romaine. Les monnaies antiques sont l'une des ressources les plus importantes pour les recherches sur l'histoire de l'antiquité. Entre autres, à travers elles nous pouvons suivre des événements historiques, qui sont complétés par des signes ou des symboles qui ont été trouvés sur les pièces de monnaie. Ainsi, les nouvelles pièces du sous-dit trésor comportent les noms des consuls romains, Lucius Cornelius Lentulus et Caius Claudius Marcellus lesquels ont exercé leur service consulaire de l'année 49 av. J.-C. jusqu'à 48 av. J.-C., précisément au moment de l'éclatement de la guerre civile entre César et Pompée, César lui-même nous le dit dans le premier livre de son œuvre. Un certain nombre de ces pièces préservent la splendeur et la beauté du joint de découpe, parce qu'ils n'avaient pas la moindre trace de frottement causé par la circulation, d'où l'insertion de pièces de monnaie sous le sol est susceptible d'être faite dans les premiers mois après leur mise sur le marché, mais cependant, au plus tard dans les années 49 ou 48 av. J.-C.[50]. Au début de l'année 49 av. J.-C., Pompée avec la plupart du sénat romain et les deux consuls mentionnés ci-dessus, a quitté Rome et l'Italie, en se jetant avec toute l'armée sur nos côtes. César lui-même, dans le chapitre 14 du premier livre, nous dit : « *La nouvelle arrivant à Rome concernant ces événements, étale une panique si grande que, lorsque le consul Lentulus alla ouvrir les caisses du Trésor et de retirer une somme d'argent pour Pompée, par résolution du Sénat, ils se sont enfuis de la ville (Rome), laissant ouverte la caisse intérieure des bons du Trésor* »[51]. Les trésors trouvés, principalement des dinars, parlent de la prospère croissance économique de Rome au Sud de l'Illyrie, parlent d'une grande tournure cruciale des relations économiques entre la péninsule Apennine et Dyrrachium et Apollonia, d'une part, et l'Illyrie en général d'autre part. Le marché illyrien se remplit de dinars romains, la propagation desquels était facilitée non seulement par le poids soulevé de cette pièce, mais aussi par la nouvelle situation politique, ce qui transforme l'Illyrie du Sud, y compris Dyrrachium et Apollonia, dans une invasion militaire[52]. Les autorités romaines avec Pompée, retirées au sud de l'Illyrie, au cours de leur séjour plus d'un an doivent avoir mis en place des ateliers pour eux-mêmes pour la coupe des devises. Nous pouvons ajouter à cela l'annonce, de Cicéron, lequel nous dit qu'à Apollonia à cette époque, en l'année 49 av. J.-C., existait un atelier romain de monnaies. Pompée, parti inopinément de Rome à l'approche de César, ne pouvait pas espérer à une victoire décisive sur son adversaire dangereux, sans fournir les ressources financières nécessaires pour couvrir les dépenses militaires, dans lesquelles on calcule le paiement des salaires les soldats. Fournir de l'argent ne posait pas de difficulté, parce que l'Illyrie, où se nourrissent les ateliers monétaires autonomes de Dyrrachium et Apollonia, également la Macédoine qui était proche, étaient riches en ce minéral. Nous ne pouvons pas avoir aucun doute que, dans l'année 49 av. J.-C., l'atelier monétaire d'Apollonia a servi le trésor romain et a mis en circulation des dinars avec les noms des consuls Lucius Cornelius Lentulus et Caius Claudius Marcellus, vu l`impossibilité d'être imprimés dans les ateliers de l'Italie, à cause de la hâte avec laquelle les autorités suprêmes de l'État ont quitté Rome. Donc, si cet atelier fut vraiment créé en Apollonia, comme les faits l'affirment, César aurait dû l'avoir utilisé pour couper des pièces, afin de, au moins, payer les salaires de ses soldats.

Dans un autre trésor, constitué de 119 pièces, dont 46 pièces sont des dinars romains républicains, à nouveau il y a des pièces avec des monogrammes des deux consuls ci-dessus mentionnés ; ce trésor, trouvé dans le Nord de Tirana, est lié par le chercheur Ceka avec l'enterrement de ces pièces dans une situation d'insécurité provoquée par la guerre civile dans les provinces romaines de l'Illyrie et, en particulier, des pillages de la tribu des Parthines par la cavalerie de Pompée, d'abord, et par les légions de César lors de la conquête de

[50] Ceka 1972, 88.

[51] Julius Caesar 2007, I, 14, 69.

[52] Ceka 1972, 91.

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leur ville, plus tard[53].

En conclusion, nous pouvons mentionner les mots de Johannes Irmscher, dans « *Remarques autour du concept allemand du XVIII*ème *et XIX*ème *siècle sur les Illyriens* » ; concernant le lexicographe Samuel Christoph Schirlitz (1797-1875), Irmscher montre que Schilitz termine son article sur l'Illyrie constatant que « *La valeur de cette Illyrie dérive de l'importance de maintes villes, lesquelles furent construites là bas aussi, comme* Dyrrachium*, Apollonia,* ***une ville dont siégeaient les sciences****, et où Octave, plus tard devenu Empereur Auguste, a suivi ses études* ».

Nermin Basha
Professor of Latin,
Tirana, Albania
nerinabasha@yahoo.com

[53] *Ibidem*, 99.

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BETRACHTUNGEN ZU EINER IN BUCUREŞTI-MILITARI-*CÂMPUL BOJA* REZENT ENTDECKTEN TÖPFEREI

MIRCEA NEGRU

Schlüsselwörter: Bucureşti-Militari-*Câmpul Boja*, Töpfereien, Militari-Chilia-Kultur.

Zusammenfassung: Die neusten Befunde und Funde in Bucureşti-Militari-*Câmpul Boja* weisen auf die Existenz eines Werkstattviertels aus dem zweiten und dritten Viertel des III. Jh. n. Chr. in dieser Siedlung am rechten Dâmboviţa-Ufer hin. Dafür sprechen sowohl die zwei Töpfereien, wie auch die in diesen entdeckten Gefäßformen.

Cuvinte cheie: Bucureşti-Militari-*Câmpul Boja*, ateliere de olari, cultura Militari-Chilia.

Rezumat: Cele mai noi descoperiri în situl de la Bucureşti-Militari-*Câmpul Boja* confirmă existenţa aici a unui cartier meşteşugăresc din al doilea şi al treilea sfert al sec. III d. Chr. Pentru aceasta pledează şi cele două ateliere de olari.

Die archäologische Ansiedlung vom *Câmpul Boja* befindet sich auf der Hochterrasse des rechten Dâmboviţa-Ufers, im Westen des Munizipium Bucureşti, im Stadtviertel Militari, Zone wo in den ’80. Jahren des vorigen Jahrhunderts der Stausee „*Lacul Morii*” erichtet wurde (Taf. 1/1). Die ersten Informationen hinsichtlich dieses Fundortes wurden 1922 von Constantin Nicolăescu-Plopşor veröffentlicht[1]. Diese wurden sieben Jahre später von Dinu V. Rosetti bereichert[2]. Militari-*Câmpul Boja* ist fast drei Jahrzehnte in Vergessenheit geraten; wurde erst 1958 von Vlad Zirra und seinen Mitarbeitern „*wieder entdeckt*”[3].

Im selben Jahr wurden hier von Vlad Zirra und Margareta Tudor archäologische Grabungen durchgeführt. Bis 2012 wurden 23 Forschungskampagnen, die in drei Zeitabschnitte einzuteilen sind, unternommen. Leiter der Grabungen waren 1958 und 1960-1961 Vlad Zirra, 1978-1979 und 1981-1985 Mioara Turcu (Zgîbea) und ab 1994, 1996-1999 und 2001-2012 Mircea Negru.

Die Forschungen erlaubten das Entdecken von neolithischen (Boian-Kultur), bronzezeitlichen (Glina-Kultur, Militari-*Câmpul Boja*-Keramik der späten Frühbronzezeit angehörend und Tei-Kultur) und hallstattzeitlichen Spuren. Es konnten weiter Besiedlungen der Geten (IV.-III. und II.-I. Jh. v. Chr.), der Militari-Chilia- (II.-IV. Jh. n. Chr.), Ipoteşti-Cândeşti- (V.-VII. Jh.) und Dridu-Kulturen (IX.-X. Jh.) und dem XVIII.-XIX Jh. geortet werden.

Zurzeit erhebt sich die Zahl der erforschten archäologischen Komplexe auf stattliche 202 ebenerdige Bauten und Grubenhäuser, Abfall- und Kultgruben, Töpfer- und Backofen, Feuerstellen und Gräber. In der Zeitspanne 1996-2008 wurden davon 144 ans Tageslicht gefördert. Die Grabungsresultate fanden ihren Platz in fünf Bücher und 42 Aufsätze[4].

Die Militari-Chilia-Siedlung

Die Funde von *Câmpul Boja* führten dazu, dass der Name *Militari* der geto-dakischen *Militari-Chilia-Kultur* in Muntenien aus dem II.-IV. Jh. n. Chr. zugefügt wurde. Dieser kulturellen Erscheinung wurden eigentlich die Grabungen des Jahres 1958 gewidmet[5].

In den 23 Grabungsetappen wurden 108 Komplexe erforscht: 34 Häuser, 2 Töpferofen, 1

[1] Nicolăescu-Plopşor 1922, 54.

[2] Rosetti 1929, 7.

[3] Zirra 1958, 1.

[4] Zirra, Cazimir 1963; Turcu 1963; Turcu 1989; Negru, Schuster, Moise 2000; Schuster, Negru 2006; Negru 2007; Negru, Schuster, Bădescu, Morintz, Comşa 2007; Negru, Bădescu, Cuculea-Sandu 2009.

[5] Negru, Schuster, Moise 2000, 57-152; Negru 2007.

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Tafel 1. 1. Bucureşti-Militari – *Câmpul Boja*, der Grabungsort. 2. Töpferei No. 2.

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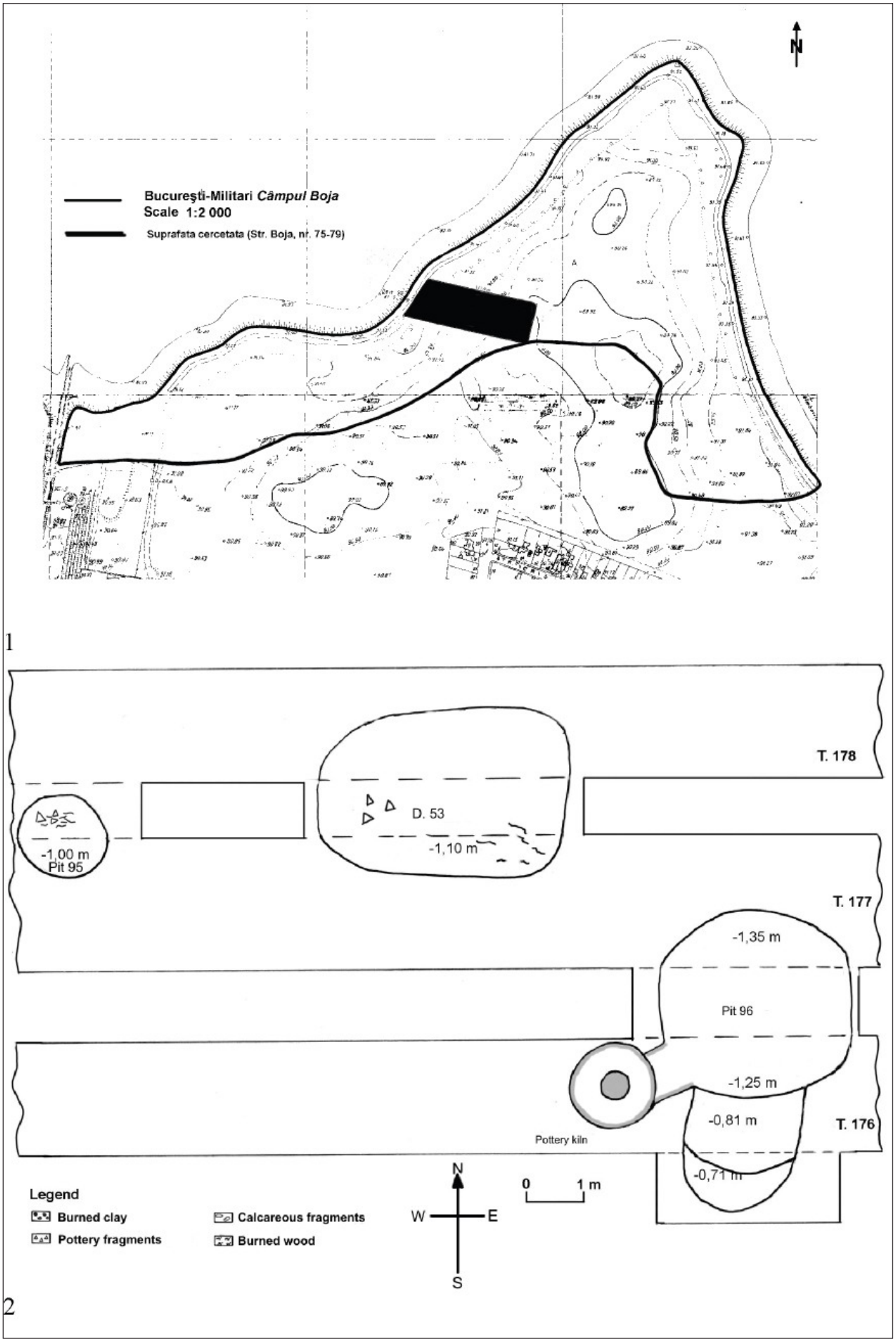

Tafel 2. 1. Werkstattviertel der Siedlung. 2. Töpferei No. 2.

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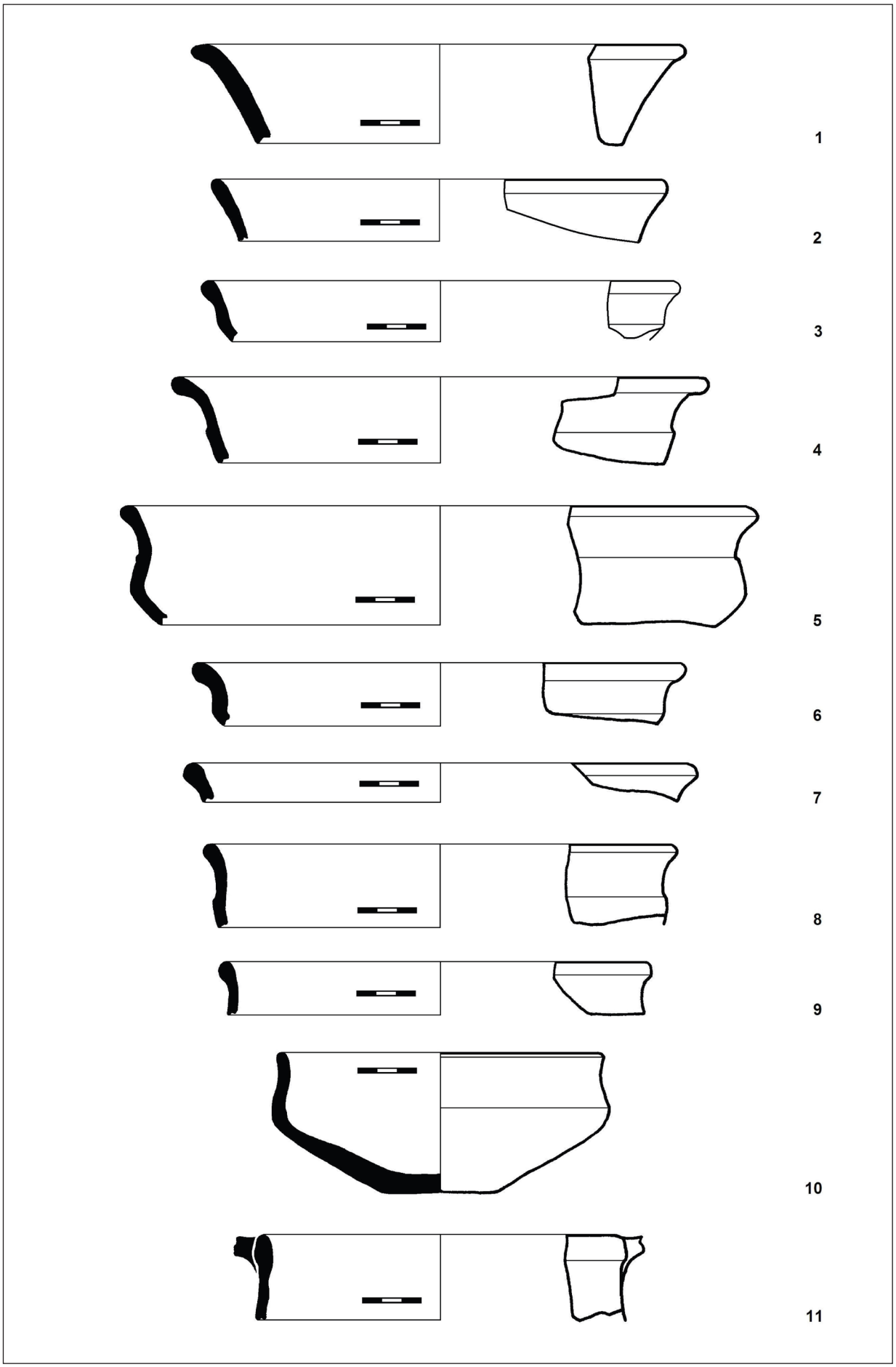

Tafel 3. Keramik aus dem Töpferei No. 2.

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Bronzebearbeitungswerkstatt, 5 Kultgruben, 66 Aufbewahr- und Abfallgruben. Die Grubenhäuser waren rechteckig mit leicht abgerundeten Ecken. Die Stützstruktur war aus Holz, der Ruttenpflechtwerk und Lehmbewurf zugefügt wurde. Das Dach war einkanntig mit zwei Abflußseiten und wurde mit Stroh, Schilf, Blätter oder Gras abgedeckt. Nur selten wurden die Häuser mit Feuerstellen oder Ofen ausgestattet. Der Boden lag zwischen -0,78 m und -1,50 m tief unter dem damaligen Trittniveau. Sehr möglich, dass einige dieser Bauten nicht dem Wohnen, sondern anderen Zwecken dienten.

Die Anwesenheit der 2 Töpferofen und der Bronzebearbeitungswerkstatt zeugt von der wirtschaftlichen Wichtigkeit der Siedlung. Ihr Standort in dem westlichen Teil des *Sektors A* der Ansiedlung kann auf eine Zone mit Werkstätten hindeuten, das würde aber heißen, dass die Siedlung eine Planierung besaß, genauso wie die römischen Städte derselben Zeit.

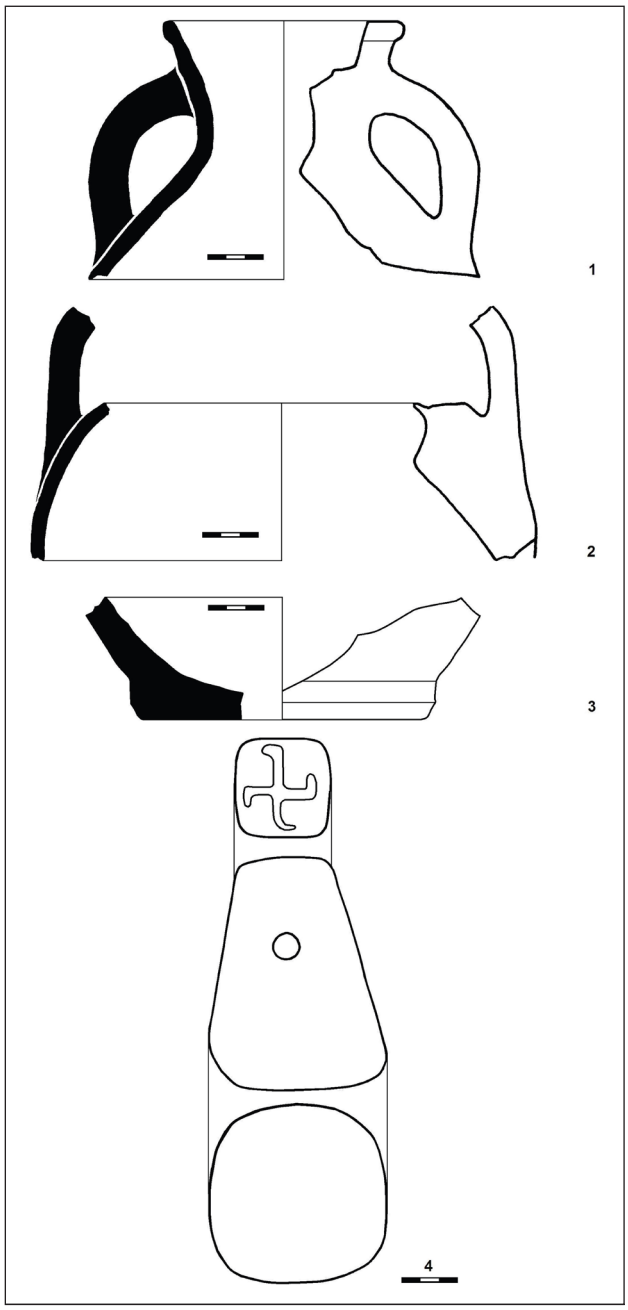
Einen interessanten Hinweis bezüglich dem religiösen Glauben und den magischen Darstellungen der Geten aus dem II.-III. Jh. n. Chr., stellen die 5 Kultgruben, in denen je ein Hundeskelett gefunden wurde, dar. Hervorzuheben ist, das Militari – *Câmpul Boja* dies bezüglich die zahlenmäßig nennenswerteste Siedlung in Muntenien ist.

Das ans Tageslicht geförderte archäologische Material ist reich und besteht aus Keramik (ganze Gefäße und Bruchstücke), Gegenstände aus gebranntem Lehm, römische Bronze- und Silbermünzen, Werkzeuge und Waffen aus Knochen, Bronze und Eisen, Schmuckstücke, viele Tierknochen u.s.w.

Zum Keramikrepertoire gehören sowohl auf der Drehscheibe angefertigte Gefäße, als auch andere die mit der Hand bearbeitet wurden. Die wichtigsten Formen waren Aufbewahrgefäße, Töpfe, dakische Tassen, Amphoren, Kannen, Schüsseln, Terinnen, Deckel. Ungefähr 16% sind römische Importstücke, Tatsache die für einen regen Handel der Bewohner dieser Siedlung mit der römischen Welt spricht.

Ein Unikum für Muntenien, ist das hier entdeckte Fragment einer *lorica squamata*. Nennenswert sind auch andere römische Eisengegenstände wie eine Fibel, ein Schlüssel und ein Bruchstück eines Gefäßes.

Unter den Gegenständen die heute zu den Inventarobjekten des *Museums des Munizipiums Bucureşti* zählen, sind Waffen (Pfeilspitzen), Werkzeuge und im Haushalt benützte Objekte (Sicheln, Messer, Gußtiegel, Spiegelgußformen,



Tafel 4. Keramik aus dem Töpferei No. 2.

Meißeln, Nägel, Netzsenker, Spindelwirtel, Webstuhlgewichte, Schleifsteine), Kleidungsverzierer (Silber- und Eisenfiebeln, Bronzeschnallen), Schmuckstücke (Perlen, einige aus Glas, Anhänger, 3 Fingerringe und ein Armband), römische Münzen aus Bronze und Silber.

Zur Werkstattzone

Wie schon erwähnt, in dem Westteil der Militari-Chilia-Siedlung scheint sich ein besonderer Platz für wirtschaftliche Tätigkeiten, gewidmet den Werkstätten, abzuheben. In der Zeitspanne 1998-1999 wurde hier eine Werkstatt eines Töpfers und eine andere für die Bearbeitung des Metalls entdeckt.

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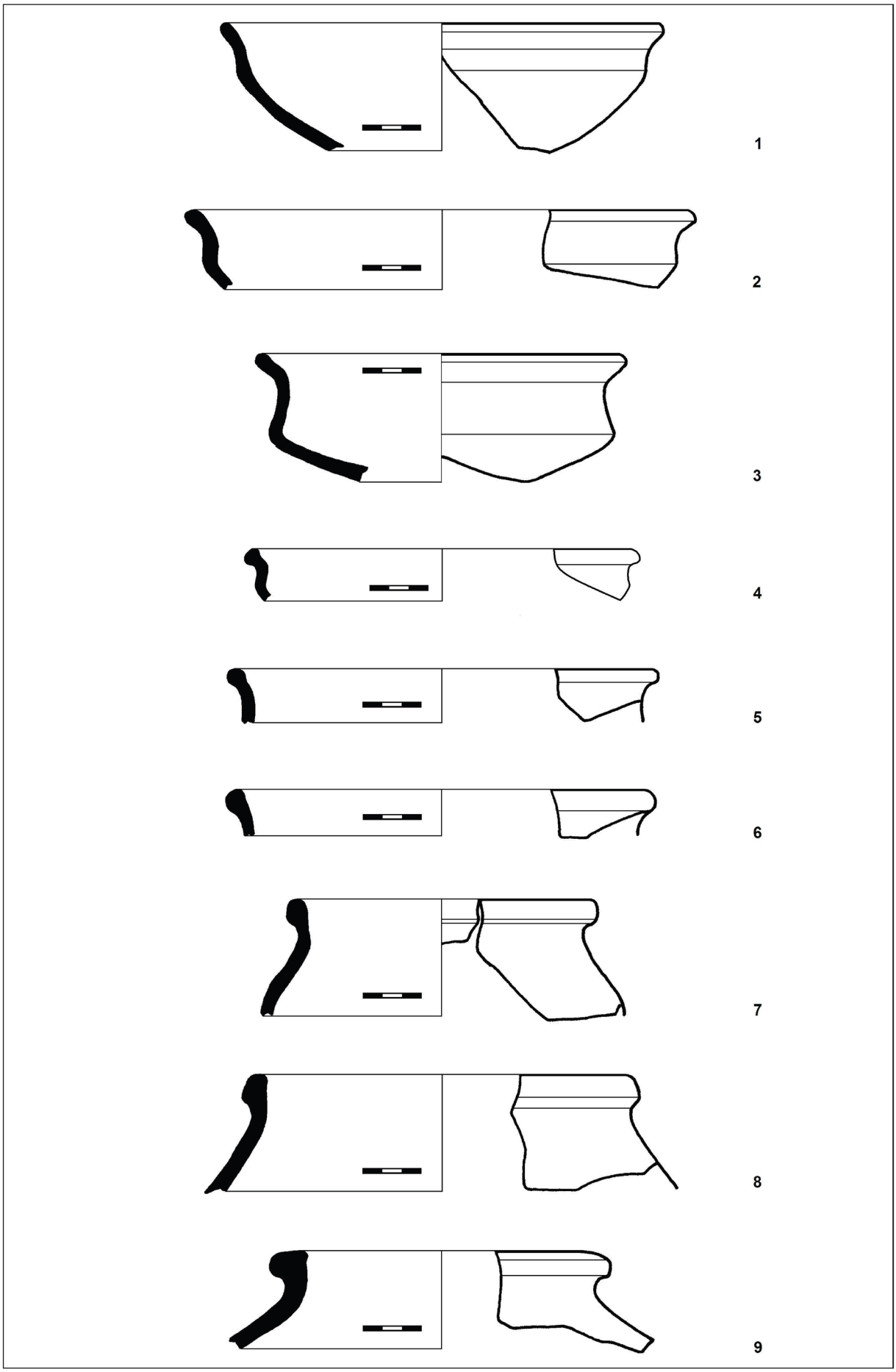

Tafel 5. Keramik aus dem Töpferei No. 2.

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Töpferei No. 1

Der Töpferofen wurde 1998 erforscht. Er lag in den *Grabungsschnitten No. 14* und *15*. Er hatte einen zentralen Standfuß. Die Feuerkammer betrug einen Durchmesser von 1.95 m und eine Höhe von 0.50 m. Die Öffnung für die Brennstoffzufuhr war nach dem Südosten gerichtet. Die durchlöcherte Plattform zwischen den Kammern hatte einen Durchmesser von 1.75 und eine Dicke von 10 cm. Die Plattformlöcher wurden in zwei ringförmigen Reihen angelegt.

Neben dem Ofen wurde eine Grube mit einer Treppe entdeckt. Ihre Form war unregelmäßig und hatte eine Maximallänge von 3.80 m, Maximalbreite von 3.10 m und eine Tiefe von 1.60 m. Im Inneren der Grube wurden viele Keramikfragmente, Lehmbewurfklumpen, Asche und Tierknochen entdeckt. Die Keramik erlaubt die Töpferei dem III. Jh. n. Chr. zuzuordnen[6].

Bronzebearbeitungswerkstatt

Die Werkstatt wurde im Jahr 1999 in den *Schnitten No. 27-29* entdeckt. Sie hatte eine rechteckige Form (4.50 x 4.30 m) und wurde in einer Tiefe von -1,60 m geortet. Im südlichen Eck lag eine Anhäufung von gebranntem Lehmbewurf. Das Vorhandensein einer gelben, archäologisch tauben Erdschicht, die die Bronzebearbeitungswerkstatt gänzlich abdeckte, zeugt davon, dass diese absichtlich verlassen wurde.

Im Inneren der Werkstatt sind Keramikbruchstücke, zwei gebrannte Lehmgewichte, vier ganze Schmelztiegel und mehrere Fragmente solcher, Bronzetropfen, eine Waage, zwei Meißeln, Nieten, rechteckige Baren, Bronzedrähte verwendet für die Anfertigung von Pfeilspitzen, andere Drahtfragmente, bronzerne Abfallbleche etc. gefunden worden Die Werkstatt wurde in der Mitte und im dritten Viertel des III. Jh. n. Chr. benützt[7].

Töpferei No. 2

Dieser zweite Töpferofen wurde in den *Grabungsschnitten No. 176-177* entdeckt (Taf. 2). Neben dem Ofen lag auch eine Grube, deren Rolle, ihm zu dienen, war. Die Öffnung für die Brennstoffzufuhr, die neben der letzten Grubenstufe lag, war nach dem Süden gerichtet. Es ist klar, dass die Öffnung ihren Standort in der meist geschützten Zone gegen Wind, Regen und Schnee lag. Dafür spricht auch die Tatsache, dass die Töpferei außerhalb dem bewohnten Teil der Siedlung zu finden war, d. h. am Ende der hohen Dâmboviţa-Terrasse.

Der Brennofen war doppelkegelförmig und besaß einen zentralen Standfuß. Die Feuerkammer hatte einen Durchmesser von 1.64 m und eine Höhe von 0.84 m und lag in einer Tiefe von -1.40 m. Der Standfuß war zylindrisch und hatte einen Durchmesser von 0.44-0.50 m. Die Tonplatte zwischen den zwei Kammern lag in Bruchstücken. Trotz dessen konnte ihre Dicke auf 0.09-0.10 m geschätzt werden. Die Gefäßkammer hatte einen Durchmesser von 1.52 m und blieb uns auf einer Höhe von 0.55 m erhalten.

Das archäologische Material

Im Ofeninneren wurden Bruchstücke Hand- und an der Drehscheibe gearbeiteter Gefäße, Tierknochen und gebranntes Holz entdeckt.

Die an der Drehscheibe erzeugte Keramik bestand aus feinem Ton, Sand und Glimmer. Es wurden Amphoren- (Taf. 3:1, 2), Topf- (Taf. 4:5, 6, 7, 9) und Schüsselfragmente (Taf. 4:1-3) gefunden.

Grube No. 96

Diese Grube diente dem Töpferofen und lag in den *Schnitten No. 176-177*.

Sie war oval, mit einem Maximaldurchmesser von 3.55 m und einem Minimaldurchmesser von 2.80 m. Die Tiefe der Grube betrug 1.35 m. Drei Treppen - 0.71 m, 0.81 bzw. 1.25 m tief - wurden in ihrem Südabschnitt entdeckt.

Handgemachte Keramik

Diese ziegelrote-gelbliche Keramikart bestand aus einem Gemisch in deren Füllung auch zermalmte Keramikstückchen (mit Durchmessern zwischen 1 und 4 mm) zu finden waren. Die Brennung war ungenügend. Aus derselben Tonpasta wurden auch Webgewichte angefertigt (Taf. 3/4, 5:12-13).

An der Drehscheibe angefertigte Keramik

Die erste Gattung dieser Keramikart trägt eine graue Farbe und wurde aus einem körnigen Gemisch (Ton, Sand und Steinchen, diese letzten 1-2 mm) ausgearbeitet. Die Brennung war auch in diesem Fall defizitär. Im Inneren sind die Gefäße schwarz, Außen grau. Es wurden hauptsächlich die Standflächen der Gefäße gefunden (Taf. 6:7).

Eine zweite Gattung, die grau gebrannt wurde, besteht aus Ton, feinem Sand und Glimmerplättchen. Diesmal war die Brennung guter Qualität. Es sind Amphoren- (Taf. 5/14-15), Topf- (Taf. 5/2-3, 6/4), Schüssel- (Taf. 6/4-7, 9,

[6] Negru 2000, 76 f.

[7] Negru 2000, 72 f.

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3/9), Deckelfragmente (Taf. 6/1-2), eine ganze Schüssel (Taf. 5/5), Gefäßringstandflächen (Taf. 6/7, 5/9, 6/9) und Gefäß mit Henkel (Taf. 6/11) entdeckt worden.

Die dritte Gattung ist ziegelrot, wurde gut gebrannt und besteht aus einer Tonpasta aus feinem Sand und Glimmerstückchen. Sie ist durch ein römisches Kännchen vertretten (Taf. 6/10).

Beige ist die letzte Gattung der an der Drehscheibe angefertigte Keramik. Sie wurde desgleichen gut gebrannt. Die Tonmischung trägt in sich feinen Sand und Glimmerplättchen.

Es konnte ein Amphorafragment entdeckt werden (Taf. 6/11).

Keramikanalyse

I. *Handgemachte Keramik*

I.1. Stumpfpyramidenförmige Webgewichte (Taf. 3/4, 5/13-14)

Gewichte dieser Form wurden in Militari-*Câmpul Boja*[8], in den von den Dakern östlich der Karpaten bewohnten Gebieten, in Poiana-Dulceşti[9] und Piatra Neamţ-Dărmăneşti[10], gefunden. Sie wurden in den letztgenannten Fundorte dem zweiten und dem dritten Viertel des III. Jh. n. Chr.[11] zugewiesen. Für Militari-Câmpul Boja wurde die zweite Hälfte des III. und der Anfang des IV. Jh. n. Chr. in Betracht gezogen[12].

Für die vorrömischen Zeit wurde solche Objekt in Radovanu[13] und Albeşti[14] gefunden und dem II.-I. Jh. v. Chr. zugewiesen.

II. An der Drehscheibe angefertigte Keramik

II.1. Aus feinem Lehm (mit Sand und Glimmer); graue Farbe

II.1.1. Amphoren mit ovalem Körper, kurzem Hals und leicht ausgeladenem Rand (Taf. 3:1)

Gefäße dieser Kategorie wurden in der Siedlung von Bucureşti-Străuleşti *La Nuci*[15] der Militari-Chilia-Kultur zugeordnet, wo sie dem II. Jh. n. Chr. bis zum Ende des III.-Anfang des IV. Jh. n. Chr.[16] angehören soll.

II.1.2. Gefäße mit rundlichem Körper

II.1.2.1. Ausgeladem Rand, mit innerer Standfläche für den Deckel (Taf. 4:9)

Gleiche Gefäße wurden in der *Siedlung No. 1* in Scorniceşti[17] (II.-ersten Jahrzehnte des III. Jh. n. Chr.)[18] gefunden.

II.1.2.2. Kurzer, waagerechter, äußerer ausgeladener Rand, mit innerer Standfläche für den Deckel (Taf. 5/9)

Gleiche Gefäße wurden in Scorniceşti[19] (II.-Anfang des III. Jh. n. Chr.) entdeckt. In Militari -*Câmpul Boja* wurde ein ähnliches Gefäß dem III.-erste Hälfte des IV. Jh. n. Chr. zugefügt[20].

II.1.2.3. Ausgeladem Rand, mit innerer Standfläche für den Deckel (Taf. 5/2)

In der *Siedlung No. 1* von Scorniceşti gehören solche Gefäße dem II. und den ersten Jahrzehnten III. Jh. n. Chr. an[21].

II.1.2.4. Mit nach außen gewölbtem Rand (Taf. 5/3)

Gleiche Gefäße wurden in den Militari-Chilia Siedlungen von Militari – *Câmpul Boja*[22] und Mătăsaru[23] und in der Provinz Dazien in Locusteni[24] und in dem römischen Lager von Buciumi[25] entdeckt.

Sie wurden in das II. Jh. n. Chr. und ersten Jahrzehnte des III. Jh. n. Chr. in Mătăsaru[26] und Locusteni[27], in das zweite und letzte Drittel des III. Jh. n. Chr. in Militari – *Câmpul Boja*[28], bzw. in das II.-III. Jh. n. Chr. in Buciumi und Militari – *Câmpul Boja*[29] und III. Jh. n. Chr. in Militari – *Câmpul Boja*[30] datiert.

[8] Negru, Schuster, Moise 2000, 119, Taf. 105:3; Negru 2007, 22, 46, Taf. 39: 1.

[9] Bichir 1973, Taf. 31: 3.

[10] Bichir 1973, Taf. 154: 3.

[11] Negru, Schuster, Moise 2000, 134.

[12] Negru 2007, 22.

[13] Turcu 1979, 202, Taf. 6: 4.

[14] Turcu 1979, 202, Taf. 6: 5.

[15] Bichir 1984, 35, Taf. XXIV: 3, 5, 8.

[16] Bichir 1984, 90.

[17] Bichir 1984, 34, Taf. XVIII: 8.

[18] Bichir 1984, 92 f.

[19] Bichir 1984, 34, Taf. XVIII: 11.

[20] Negru 2007, 22, Taf. 47: 3.

[21] Bichir 1984, 92 f.

[22] Negru, Schuster, Moise 2000, 58, Taf. 53: 1, 69, Taf. 79: 9; Negru 2007, 19, Taf. 28: 1; 34, 68: 1.

[23] Bichir 1984, 32, Taf. XII: 10.

[24] Popilian 1980, Taf. XVIII: M 122, 2.

[25] Chirilă, Gudea, Lucăcel, Pop 1972, 54, Taf. XL: 6.

[26] Bichir 1984, 86 f.

[27] Popilian 1980, 103.

[28] Negru, Schuster, Moise 2000, 130-134.

[29] Chirilă, Gudea, Lucăcel, Pop 1972, 125; Negru 2007, 20.

[30] Negru 2007, 35.

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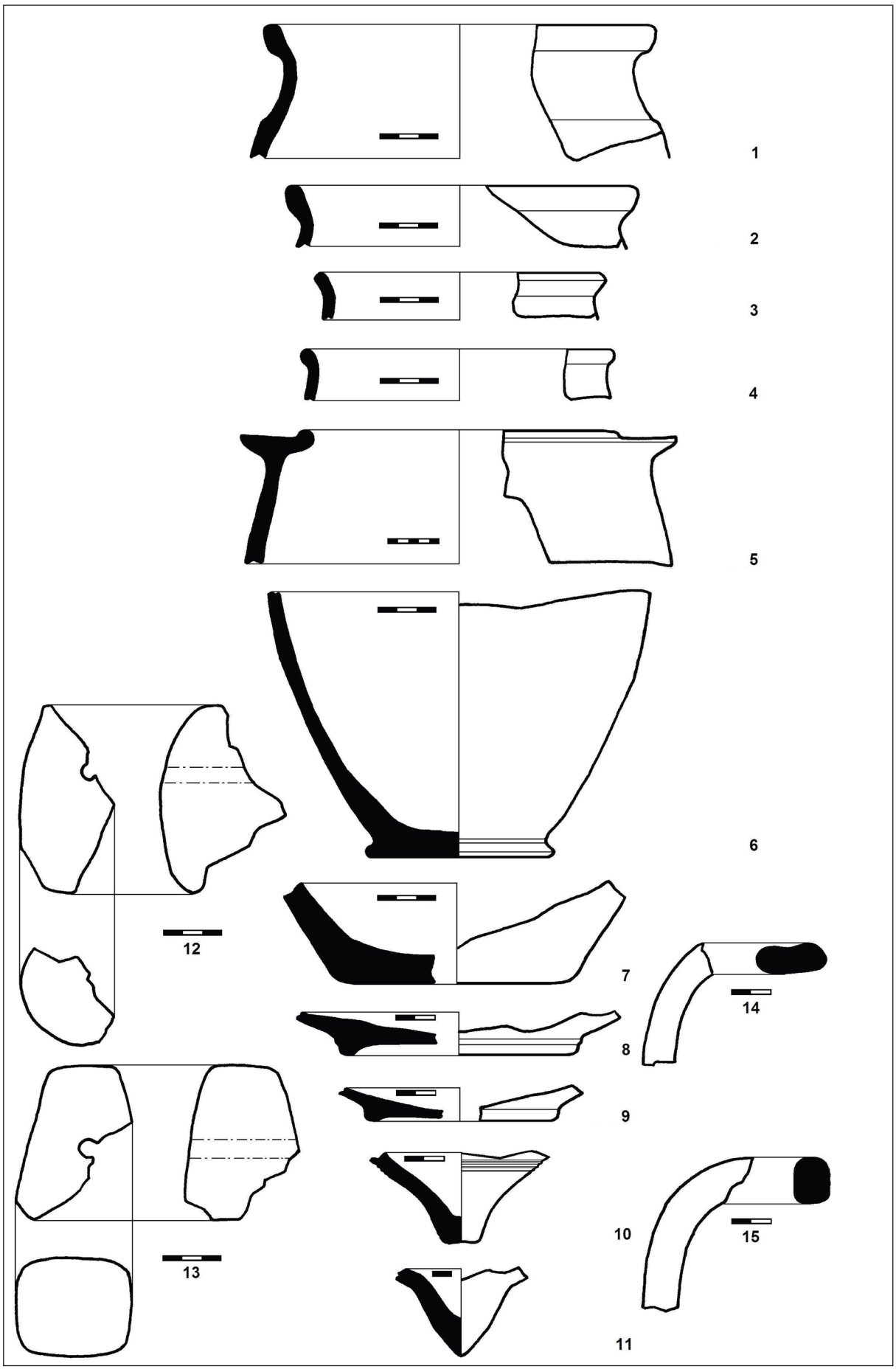

Tafel 6. Keramik aus dem Töpferei No. 2.

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II.1.3. Tassen. II.1.3.1. Stumpfkegelförmige Tassen, mit nach außen gezogenem

Die Schulter tritt nur leicht in Erscheinung (Taf. 4/2-3, 6/5, 9). Solche Tassen wurden in Crângaşi[31] und Sântana de Mureş[32], wo sie der Sântana de Mureş-Černeahov-Kultur zugewiesen worden sind, und in den älteren Grabungen in Militari – *Câmpul Boja* entdeckt[33]. Für die Tassen aus Militari wurde die Neige der Hälfte und das dritte Viertel des III. Jh. n. Chr., für Sântana de Mureş das Ende des III. und der Anfang des IV., bzw. die zweite Hälfte des IV. Jh. n. Chr. in Crângaşi als Produktionzeit angekündigt.

II.1.3.4. Doppelt-stumpfkegelige tiefe Schüssel. Der Rand ist waagerecht und besitzt eine Kante im Inneren (Taf. 5/5)

Eine solche Schüssel wurde in Militari – *Câmpul Boja*[34] entdeckt und dem III. Jh. n. Chr. zugewiesen.

II.1.3.5. Deckel

II.1.3.5.1. Kuppelförmige Deckel, außen mit einem runden Rand versehen (Taf. 6/1, 7)

Diese Deckelform wurde auch in den älteren Grabungen in Militari – *Câmpul Boja*[35] gefunden und wurde dem II.-III. Jh. n. Chr. zugeordnet.

II.1.3.5.2. Kuppelförmige Deckel mit dünnen Wänden. Der Rand ist leicht ausgeladen (Taf. 6/2)

Solche Deckel wurden entlang der Jahre in Militari – *Câmpul Boja*[36] und Timişoara-Freidorf[37] entdeckt und sind dem zweiten und dritten Viertel des III. Jh. n. Chr. im erstgenannten Ort[38] und dem II.-IV. Jh. n. Chr. in Timişoara-Freidorf[39] zugewiesen worden.

II.2. Feine, graue, mit einer schwärzlichen Tonmischung überdeckten, an der Drehscheibe angefertigte Keramik. II.2.1. Bauchiges Gefäß, das einen Stützkannal für den Deckel besitzt (Taf. 4:7)

Ähnliche Gefäße wurden in der *Siedlung No. 1* von Scorniceşti[40] gefunden. Sie wurden dem II. und den ersten zwei Jahrzehnten des III. Jh. n. Chr. zugeordnet[41].

II.3. Feine, ziegelrote, auf der Drehscheibe angefertigte Keramik

Es wurden Fragmente einer kleinen römischen Kanne entdeckt (Taf. 6:10). Gleiche Gefäße wurden in Sucidava gefunden[42]. Sie sind insbesondere dem III. Jh. n. Chr. eigen[43].

II.4. Feine, beige, auf der Drehscheibe angefertigte Keramik. Römische Amphoren

Es wurde nur die kegelförmige, mit einer leicht spitzen Basis, gefunden (Taf. 6/11). Gefäße dieser Kategorie wurden auch in *Romula*, Stadt der Provinz *Dacia Malvensis*, wo sie dem II.-III. Jh. n. Chr. angehören[44], entdeckt.

Einige Schlußfolgerungen

Der Fund einer neuen Töpferei in der Militari-Chilia-Siedlung in Bucureşti-Militari – *Câmpul Boja* weist auf die Existenz eines Handwerkerviertels hin. Der Töpferofen mit zwei Kammern, einem zentralen Standfuß und einer durchlöcherten Trennplattform ist anderen der zweiten Eisenzeit und der ersten Hälfte des I. Jh. n. Chr. ähnlich.

Diese Art von Ofen wurde z.B. im dakischen Milieu des II.-I. Jh. v. Chr. in Bucureşti – *Cățelu Nou*[45] und Pădureni[46] entdeckt. Im II.-III. Jh. n. Chr. wurden solche Ofen im karpischen Gebiet in Butnăreşti[47], Dărmăneşti-Piatra Neamţ[48] und Truşeşti[49], während in der Militari-Chilia-Kultur in Străuleşti-Măicăneşti[50] gefunden. Gleiche Ofen wurden auch für die II.-IV. Jh. n. Chr. im Gebiet der Oberen Theiß[51], bzw. der Sântana de Mureş-Černeahov-Kultur[52] freigelegt.

Eine nennenswerte Verbreitung hatte dieser Töpferofen auch im Rahmen der Töpfereien des Römischen Reiches. So ist er recht oft archäologisch in der Provinz Dacia anzutreffen: *Romula*, *Sucidava*, Slăveni, Drobeta, *Buridava* und Bumbeşti[53].

[31] Zirra, Tudor 1954, 315, Abb. 1: 2.

[32] Istvan 1912, M58, Abb. 77: 7.

[33] Negru, Schuster, Moise 2000, 109, Taf. 108: 4; Negru 2007.

[34] Negru 2007, 34, Taf. 67: 2.

[35] Negru 2007, 25, Taf. 26: 2.

[36] Negru, Schuster, Moise 2000, Taf. 57: 9, 79:2, 85: 11-12.

[37] Benea 1996, 293 f., Abb. 51: 1.

[38] Negru, Schuster, Moise 2000, 130-134; Negru 2007, 20, Taf. 32: 1.

[39] Benea 1996, 293 f.

[40] Bichir 1984, 34, Taf. XVIII: 8.

[41] Bichir 1984, 92 f.

[42] Popilian 1976, Taf. LVII: No. 667, 669.

[43] Popilian 1976, 107, Anm. 634.

[44] Popilian 1976, 45, Taf. XVI, No. 205.

[45] Leahu 1963, 30, Abb. 19-20.

[46] Bobi 1999, 117, Taf. 41.

[47] Bichir 1973, 57.

[48] Bichir 1973, 57 f.

[49] Bichir 1984, 27.

[50] Bichir 1984, 26.

[51] Kotigoroško 1995, 120-121.

[52] Bichir 1984, 27.

[53] Popilian 1976, 139 f.

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Zur chronologischen Zuordnung ist nur die Keramik in Betracht zu ziehen. Die Formenanalyse der Gefäße welche im Ofen und in der Zufuhrgrube entdeckt wurden, geben Aufschluss hinsichtlich der Benützungszeit der Töpferei.

In Militari – *Câmpul Boja* wurden Gefäßformen, die dem breiten II.-III. Jh. n. Chr. (Taf. 6/1, 7), andere dem III. (Taf. 5/5, 6/10), aber auch dem zweiten und dem dritten Viertel des III. Jh. n. Chr. (Taf. 4/1, 5/13, 6/2) zugewiesen können. Wahrscheinlich waren die zwei Töpfereien zeitgleich, Tatsache die erneut, wie schon erwähnt, die Existenz eines Werkstattviertels aus dem zweiten und dritten Viertel des III. Jh. n. Chr. in Militari – *Câmpul Boja* bekräftigt.

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PERSONAL NAMES AT HALMYRIS

MIHAIL ZAHARIADE

Keywords: name, *gentilice*, cognomen, men, women, marriage, army, administration, province, father, mother, son, daughter, inscription, evidence.

Abstract: The study analyses a list of 60 personal native, Greek and Roman names known thus far from epigraphic and literary evidence found or referring to Halmyris. Beside the examination of every single PN, this onomastic approach discusses aspects from the daily social life: families, social mobility, age and death, religion of the subjects, involvement in economic, juridical, administrative and military life of this key strategical fortress at the Lower Danube.

Cuvinte cheie: nume, *gentilicium*, cognomen, bărbaţi, femei, căsătorie, administraţie, provincie, tată, mamă, fiu, fiică, inscripţie, dovadă.

Rezumat: Studiul analizează o listă de 60 de nume autohtone greceşti şi romane cunoscute până în prezent în sursele epigrafice şi literare care se referă la Halmyris. Pe lângă analiza fiecărui nume în parte, această abordare onomastică discută aspecte din zona vieţii sociale: familii, mobilitatea socială, vârstă şi moarte, religia subiecţilor, implicarea în viaţa economică, juridică, administrativă şi militară din arealul acestei aşezări de o importanţă strategică majoră la Dunărea de Jos.

The thirty years systematic excavations in the Halmyris fort occasioned the unveiling of a huge amount of evidence in a broad field envisaging its history, social and economic development, and environmental evolution. If artefacts offered material evidence and answers for many key aspects while historical sources a general frame of the settlement's long existence, epigraphic discoveries unveiled the living facet of this society with its daily events, characters involved in local official or private activities, their misfortunes and good opportunities, social mobility, group or individual attitudes, religious believes.

The gazetteer is conceived to collate and discuss the names of the thus far known individuals who resided permanently or temporarily in the ancient Halmyris area (fortress and civil settlement). It includes 49 PN recorded on funerary and votive inscriptions, and on building material (bricks, pottery shards) as well (no. 1-9; 10-13; 16-20; 24-31; 34-55; 57-58) found between 1981 and 2010. All these names were summarily discussed in the volume II of the Halmyris Monograph, General Editor Mihail Zahariade, *The Greek and Latin Inscriptions from Halmyris*, eds. Mihail Zahariade, Cristina-Georgeta Alexandrescu, BAR International Series 2261, Oxford 2011 (further on GLIH).

I considered necessary to incorporate in the list eight names (no. 10, 14-15, 21, 22, 32-33, 56) recorded in a hagiographic source, *Vita Sanctorum Epicteti presbyteri et Astionis monachi*, which all have a particular significance for the Halmyris society in late 3rd-early 4th century. Also, an individual (no. 23) is recorded by a church author as being present at Halmyris in a literary source in a critical moment in the history of the fort.

1. AELIA BENDSI

Bendsi: var. (local) fem. PN for the theophoric fem. *Bendis*[1]; derivation from the name of the deity worshipped in Thrace, Athens, Bithynia and identified with Artemis (Diana) or Hekate. PN in Thracian environment or amidst a milieu of Thracian tinge of Asia Minor[2]. *Bendi-Bendis* is rather frequent; a mistake of the lapicid is possible, but less probable. **B.** from Halmyris could be a *hapax*. The pronunciation must have been presumably *Bentsi>*

[1] Zgusta 1955, 279-280, no. 557; Dechev 1976, 50-51.

[2] Var. e.g: *Bendi Paibis (filiae)* (Philippi, Macedonia); *Sises Mucasenis et Bendina marita* (CIL III, 6137; ILB, no. 176; OPEL I, 117: Breshte, Bulgaria); Φλ(αυία) Βένδις (Kazarov 1938, 257: Doganovo, Bulgaria); Βένδις Ζείπαδος (Picard 1921, 171 no. 33); Βένδις (Picard 1921, 173, no. 46: Thasos; Βένζει θυγάτηρ Μουκαπόρεως (IOSPE II, 223; Zgusta 1955, 279-280, no. 557: Panticapaeum). As Gr. PN few records (LGPN I, III A; IV s.v. Βενδίς; Βενδίς var. Βενδοῦς); for the name in general: Tomaschek 1980[2], II 2, 12; Cojocaru 1997, 44, no. 8; Dana 2006, 131; Vlahov 1976, 38, 100; *Bendis*, daughter of a marine, C. Iulius Bithus, from Philippopolis (discharged in 160), RMD 105; *Aurelia Bendia, coniuncx* with *Valeria Valerix filia heredes of Valerius Bitieus discens ounsi (*i.e. *uncinarius)* in legio II Parthica at Qal'at el Mudik (215-217, or 231-233) (unpublished; information W. Van Regen).

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Benţi, nearer to Βένζεις, with ζ pronounced *dz* in the Thracian-Getae local linguistic environment[3].

Originally a peregrine woman; she could have acquired the gentile name during Hadrian's or Antoninus Pius' reigns. **B**. was the wife of *Titus Flavius Secundus* (no. 28)[4] and seems to have married him after she acquired the gentilice that explains its preservation after marriage. *Secundus* held Roman citizenship and *Aelia*, if she has not held it before marriage, then she could have obtained it after.

2. AELIA MARCIA

Marcia common combination of Latin PNs[5]; known at Halmyris (no. 35). **M**. apparently acquired the gentilice during Hadrian or Antoninus Pius possibly following marriage with *Aelius Sola* (no. 5) who was presumably in the military and was granted citizenship upon discharge. She died earlier than her husband who set the epitaph[6].

3. AELIUS[----]

Some relationship is to be envisaged with a certain *Papirius* (no. 41); the fragmentary state of the inscription makes impossible any further discussion[7]. A possible origin from *Rat*[*iaria*] is to be envisaged.

4. AELIUS SABINUS

The gentilice and cognomen are frequently associated; *Sabinus*, old Italic (Etruscan) PN; highly frequent in mid Italy and Celtic speaking provinces; certain extension in Lower Moesia[8].

S. was *Aelius Valens*' son (no. 6); the break in the stone makes unclear whether it was *Sabinus* who lived probably eight years (VII[I?]) or there was another individual who lived that long given the existence of an *e*[*t*---] after **S**. name[9].

5. AELIUS SOLA

S. was *Marcia*'s husband (no. 2). The PN is recorded for the first time at Halmyris.

Sola (rad. *sel* -), typical Thracian PN widespread particularly in Bessian lands and Thracian speaking provinces (Dacia, Moesia Inferior)[10]; frequent in military environment, both in auxiliary units and imperial navy[11].

S. at Halmyris must have been a soldier in the navy squadron or in the legionary detachment[12].

6. AELIUS VALENS

Valens as cognomen is exceptionally common and remarkably used in the Balkan provinces[13]. There are two *Aelii Valentes* on the inscription. The epitaph is set by an *Aelius Valens* for another *Aelius Valens* who died aged 45. The unsolved problem as yet is the relation between the two Aelii Valentes. It may be that *Aelius Valens*, the dedicant, held a posture of either father (?) (of *Aelius Valens*) or comrade-in-arms; strong hint that the latter was a veteran in the army. **V**. could have been granted citizenship upon levy (legion) or discharge (navy)[14].

7. AELIUS VALENS

See infra no. 6.

8. AELIUS SATURNINUS

Common combination of gentilice and cognomen; *Saturninus* is old Italic[15], found everywhere in the European and African provinces[16]; *Saturninus* contains the suffix, *-inus*, applied to later masculine PNs containing father's gentilice[17].

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[3] Russu 1967, 150.

[4] GLIH no. 22 with the bibliography.

[5] OPEL III, 57; fem. derivation from theophoric *Marcius*>*Marcia*, *Martius*>*Martia*; Schulze 1991, 188, 466; OPEL III, 2000, 60-62.

[6] GLIH no. 24 with the bibliography.

[7] GLIH no. 29 with the bibliography.

[8] Schulze 1991, 222-223; Dean 1916, 54-55; Alföldy 1969, 116; Minkova 2000, 82; Solin, Salomies 1988, 417; OPEL IV, 40-41.

[9] GLIH no. 20 with the bibliography.

[10] Katsarov 1938, 31-34; Tomaschek 1980[2], 43; Dechev 1976, 465-466; Minkova 2000, 256; OPEL IV, 2002, 86.

[11] *Meticus Solae*, *Bessus* (ala I Asturum) (CIL XVI 45: Plovdiv) (99); *Bithus Solae*, *Bessus* in *numerus Equitum Illyricorum* (Dacia Inferior) (RMD, 39 = IDR I 13: Palamarca) (13.02. 140); *Sola Mucatri*, veteran in *ala Tungrorum Frontoniana* CIL III 787: Ilişua); *Solas*, on a receipt for the squadron of *Donatus* in *ala veterana Gallica* from Egypt (130) (P. Lond. II 482[10]; CPL 114[10]); soldier in the praetorian navy from Misene, *C. Iulius Victor qui et Sola Dini*; the soldier insisted on making known his former Thracian name on the official document (diploma) (CIL X 3593); *Septimius Sola* in legio II Parthica (Qal'at el Mudik) (212-217) (unpublished; information W. Van Rengen).

[12] GLIH nr. 24 with the bibliography.

[13] Solin, Salomies 1988, 18, 46, 66, 247; OPEL IV, 2002, 141-142; Balkan provinces and Middle Danube: ILB passim; Minkova 2000, 270; IMS passim; IDR passim: ISM passim; RIU passim.

[14] GLIH no. 20 with the bibliography.

15 Schulze 1991, 467.

[16] Dean 1916, 48-49; OPEL IV, 2002, 51-53; Solin, Salomies 1988, 18bis, 20, 30bis, 54, 55, 58, 76, 113, 213; ILB, passim; IMS, passim; IDR passim; Minkova 2000, 265, for the Moesian provinces and Dacia.

[17] Kajanto 1982, 33.

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S. served in the local garrison, likely in the legionary detachment (V Macedonica or, later, I Italica). He died after five years of service (*militavit annis V*) in unknown circumstances. Roman citizenship could have been granted upon enrolment[18].

9. AELIUS TITIANUS

Titianus, follows the rule of the late onomastic construction with the addition of the suffix *–ianus*, i.e. suggesting originally 'belonging to' applied commonly to a gentilice[19]; a certain spread in Lower Moesia and elsewhere[20]. J. Kajanto counted 142 cases in the Empire. **T**. was *Flavia Titia*'s son (no. 25); he acquired the Imperial gentilice apparently during Hadrian or Antoninus Pius[21].

10. ALEXANDER

Astion's father; **A**. was *primarius* of a city, apparently on the north or north east coast of Asia Minor, as shown by the context of the account shows. The term refers to a high position in the city administration. Codex Theodosianus records the terms *primas, primus*, like in *primatium urbium vicorum castellorumque*[22]. In a town, *primus* would stand for chief of municipal council or municipal decurions. A *primarius* is attested in the 4th century in Civitas Canusium, a post held by *Iulius Pacatus Senecio*[23]. It is not sure whether the term circulated already in the second half of the 3rd century, a period to which the story refers to, or the editor made use of a 4th century wording to express some earlier realities. **A**. was apparently very rich: *nimium ditissimus* (I 5).

A. officially put his property under law protection (*universam substantiam suam sub actoribus et procuratoribus reliquerunt*) (III 26) before leaving the city in search of his son.

The editor conferred **A**. an insignificant role at Halmyris compared to that of his wife who appears more active and involved. **A**. does not understand too much from the reading of the Gospel (IV 37, 40) and asks help from *Vigilantius* to explain the passages more explicitly.

Alexandros, Gr. Ἀλέξανδρος common PN; borrowed in Lat. as *Alexander*, widely spread in the Roman Empire[24].

[18] GLIH no. 30 with the bibliography.

[19] Kajanto 1982, 32-35. *Titianus* from old *Titia* gens; Schulze 1991, 425.

[20] ILB 232, 438, II 24; Minkova 2000, 89; OPEL IV, 2002, 123-124; Solin, Salomies 1988, 187, 412.

[21] GLIH no. 21 with the bibliography.

[22] CTh. VII 18.13.

[23] AE 1987, 280.

[24] LPGN I-VA s. v. Ἀλέξανδρος; OPEL I, 41.

11. ΑΜΑΙΟΣ

Ἀμαίος, Gr. PN[25]. At Halmyris, he was the owner of a 'tribaion' (a particular type of recipient), a local craftsman or merchant and vendor of the vase to a certain Σίμη (no. 46) datable in late 3rd-early 2nd century BC[26].

12. ΑΡΑΚΛ(Α?)

'Αράκλ(α?) perhaps local var. for 'Ηρακλᾶς (Histria); Ἡρακλει [---] (Callatis); Potaissa: Ἡράκλα[27]. Ἀράκλῆς contr. Ἡράκλῆς (Att.), Ἡράκλες (Acc.) suggests a Doric form of the PN[28].

13. ARTEMIDORA

Artemidora (Ἀρτεμιδώρα) fem. PN; (m. Artemidoros, Ἀρτεμίδωρος); Gr. theophoric fem. PN[29]; common in European and Near Eastern provinces. **A**.'s husband was *Nepotianus* (no. 40); frequently as main name followed by patronymic[30].

14. ASTION

Name: *Astion nomine* (I 5); *juvenem, Astion nomen habentem* (IV 33). The name, Ἀστίων, is rare[31]. Most likely, Thessalian in origin; not known in any of the provinces of Asia Minor.

[25] LGPN I s.v Ἄμαϊς; III A: Ἄμμαῖος.

[26] GLIH no. 106 with the bibliography.

[27] ISM I, 201, B 18 (Histria); ISM III, 35, A 37 (Callatis); ILD 529 (Potaissa).

[28] Pape, Benseler 1911, 462: Ἡρακλᾶς; LPGN I-Va s. v. counted 73 names; Hornblower, Matthews 2000, 58; GLIH no. 38 with the bibliography.

[29] Pape, Benseler 1911, 147; LGPN I-VA, s. v; Hornblower, Matthews 2000, 58, 59, 66, 136; OPEL I, 2005, 77; I^2 277.

[30] Beshevliev 1970, 19-20; GLIH no. 28 with the bibliography.

[31] Ἀστίων: Kalindoia (Mygdonia, Macedonia): (Hatzopulos$_2$ 84-85 no. 62, 35: Ἀστί[ων] or Ἀστί[ας]; (311 BC); Limoghardi (Narthakion) (Thessalia-Achaia Ftiotis); IG, IX^2, 91 col. III l. 70 (2nd c. BC); LPGN I 57: LGPN III 76; Αστίων SEG XXXVI 626. 35; Ἀστιούνεῖος(=ῆος) as a Thessalian genitive of the otherwise unattested name; Ἀστιουνεύς: Derveni: SEG, 37, 1987, 549; cf. Mihailov 1989, 56; inscription on a krateros (ca. 300 BC); Ἀστίνος (Euboia) IG, XII, 246, B. 113 (4th -3rd c. BC); *Athens* FD III 25, 34 (106/105 BC); *Halimous* IG II^2 5533, 9; 5541, 2; IG II, 5579, 6; SEG 22, 172 (4th c. BC); Ἀστύονομος; Athens: IG, II^2, 1696, 22 (352/351 BC); Ἀστιούν: frequent in Thessaly (Pelasgiotis) at: *Atrax*: SEG, 44, 554; ZPE 14, 1974, 21-22, no. 1, 11 (3rd c. BC); *Kranon*: IG, IX^2, 459, 9; SEG 23, 437, 13 (3rd-2nd c. BC); *Larissa*: SEG, 30, 567 (4th c. BC); *Pherai*: SEG, 25, 664 I, 59; 29, 552 (ca. 300 BC); variant: Ἀστιούνειος: *Larissa:* SEG, 41, 568 (200-190 BC); LGPN III 76; Other variants: Ἀστίης: Euboia, Styra: IG XII (9), 56-59 (5th c. BC) and the variant Ἀστίες Ἀστῖνος: Euboia-*Erethria-Aphareus*: IG XI (9), 246 B 113 (4th-3rd c. BC); *Tenos*: IG XII Suppl. 138, no. 312; Ἄστων: *Eretria*: IG XII 245 (Ἄστων Ἐμπέδωνος, a list on a marble stele in the temple of Apollo); *Histiaia*: IG XII 1208; *Rhodos*: Ἄστος: Hesperia 32, 1963, 319 (310-240 BC); Ἀστύονομος: Athens: IG 2^2 1696, 22 (352-351 BC); Athens Oion: IG II^2 1553, 19; 3831 (4th c. BC); IG II^2 3832; IG IX (1)^2;

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Appearance: a*dolescens nimium decorus vultu, et pulcher aspectu* (I 5); […] *Astion monachus statura et ipse procerus existebat; sed et nimium pulcher ac delicatus* (III 20). The anthropological expertise of the skeleton 2 established a 170-176 cm tall, Dinaric-Armenoid type, strong constitution male[32].

Origo: *originem vel genus meum* […] *ignoro quod scio tantum modo breviter et in transcursu tibi indicabo; pater meus primarius urbis huius et nimium ditissimus; mater vero illustrum genere et Iulium senatoris extit filia* (I 5).

A. lived apparently in the same province and city with *Epictetus* (no. 21), as long as he visited *Epictetus* at his house (*cella*, I 1; *mansio* I 9) and states that **'***pater meus primarius urbius huius'* **(**I 5). In III 25 the editor of the account was about to tell the city of origin of **A**. and *Epictetus* but hides it under *in partibus Orientis* […] *in civitatem unde erat oriundus***. A**.'s parents take easily a ship from the port of their city (*navim protinus conscenderunt***;** III 26) in order to sail to Scythia and in search for their son.

A.'s 'ignorance' of his own origin in front of *Epictetus* is induced by the late 4th century editor; he introduces an apparent overall ban of information in the story on the origin of the two individuals (III 19); the silence on this issue must have been breached by **A.** interrogated by *Vigilantius* (III 22) or other inquirers on which occasion significant evidence and answers was obtained and written down in the official record of the trial. **A**. was too young (17) at the date when he met *Epictetus* to know in detail all the aspects of his origin. **A.** relates roughly what he conjecturally knew: *tantum modo breviter et in transcursu* (I 5).

Parents: *Alexander: pater … primarius urbis huius et nimium ditissimus* (I 5); IV 47 (father); *Marcellina***:** *mater vero illustrum genere et Iulium senatoris extit filia* (I 5); *meus Astion* (IV 36) (mother); *Astion filius vester* (IV 37); *Astion vester* (IV 41); *Astion noster* (IV 43).

Family caressing: *filius dulcissimus meus et unicus meus pignus Astion charissimus*; *inter tuos cives ut columba pulcherrima incedebas; radius solis inter omnes; splendidissima luna inter populare vulgus coruscabat* (father) (I 10); *dulcissimus filius Astion*; *corona capitis mei; fructus ventris mei; arbor; margarita; gemma pretiosa; lampa; regalis statua* (mother) (I 11); *unicus Astion* (IV 34); *dulcissimus filius Astion* (IV 35).

The density of the epithets addressed by parents to *Astion* is remarkable. The terms were introduced by the Christian editor who fabricated the superlative wording intended to create expressivity and strike the imagination, to touch the hearts and impress the sorrow of an irremediable loss. *Dulcissimus<dulcis*, here as: *dear, treasured, cherished*; appears three times in the passage; *Carissimus<carus*, here as *dear, beloved*, is rendered *charissimus* with C=ch simulating a Greek tinge pronunciation, whereas the hand of the copyist in a Greek speaking environment is visible. The editor applied a colorful vocabulary from different domains: animal kingdom (*columba*); astronomy (*sol, luna*); precious stones (*margarita, gemma*); administration (*rex*); house holding (*lampa*); human (*venter*).

Religious orientation: Traditionally, Greek-Roman religion (*gentilis*); converted to Christianity by *Epictetus*: *procidit ad Senis genua, et rogare eum coepit, ut illi se potius offerret, cui ipse ab ineunte aetate deserviret, qui et tantae potentiae et magnitudinis solus haberetur* (I 8); *Jube me hodie fieri catechumenum; Sacramentum baptismatis tribue. Cumque omnia, quae Christianae pertinent religioni* (I 9).

At Halmyris he had serious doubts on something which the editor avoids to reveal: *turpis* […] *cogitatio* […] *mentem eius subito invasit*; *sordida cogitation* […] *in mentem ascendit* (I 17), and which **A**. cannot get rid of *Epictetus*' reproachful tone on **A**.'s thoughts (*tristitia, mortiferam tristitiam*) becomes worrisome when the Christian faith is at stake. *Epictetus* had strong fear of a possible **A.'**s defection from the faith expressly vouched by the editor (III 30)*: non possim esse incredulus de bonitate Dei, eo quod potest te et sine mea præsentia in omnibus conservare, sicut et usque in hodiernam diem custodivit immaculatum*: that could explain why, in front of the judges, *Epictetus* insisted his pupil to be first executed (III 31) and be certain **A.** would not defect and abjured Christian faith and thus save his life.

Stance as transmitter of Christian faith: *collata est eis plurima gratia adversus omnes infirmitates: contra daemones maxima illis potestas tributa est* (I 15). **A**. accompanies his miraculous healings by proselytism actions stimulating people to embrace Christianity as their new religion (I 15-17).

Athens Phyle: IG II^2 1028, II 124 (106-101 BC); LPGN I 92; *Astio*: *Rome*: CIL VI 7.1 nr. 4159: *M. Livius/Divae Aug(usti) L(ibertus)/Astio; 10648(3): D(is) M(anibus) L(iberto) Astio et Flaviae Deuterae Claudia*; 12559: *D(is) M(anibus) L(ibertus) Astio Clementi vix(it) a(nnis) VIII m(enses) VII*; in Roman period as names born by freedmen.

[32] Miriţoiu, Soficaru 2001-2003, 177-178.

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Attitude and involvement in local society: *Astion plurima miracula in nomine Domini operabatur* (I 15); *appropians juxta illum, et orans pro eo sufficienter, salutare signum in fronte ejus fecit* (I 15); *assumens hominem, cum universis, qui aderant, eadem hora catechumenos effecit, et post paucos dies Sacramentum eis baptismi tradidit* (I 17); *apprehensa ejus manu dextra, elevavit eum: et protinus consolidatæ sunt bases ejus et plantæ, et exilivit et ambulavit* (I 16-17).

Unlike *Epictetus*, who apparently lived a recessed life, **A**. makes repeated egresses for house holding needs, among which bringing water from the Danube is most distinct; on these occasions he might have contacted people from the local community (I 15; 17).

Christian feature: *sacerdos Domini* (I 17). *Astion monachus* (III 21, 23; IV 49). The attributes given in the text belong to a later tradition and are inserted by the late 4th century editor. **A**. appears labelled as monk (*monachus*) only later in the account. The term priest (sacerdos) applied to **A**. seems euphemistic, for it is applicable to a person who is certified by a higher church authority, which was absent at Halmyris during the trial and execution (290).

Later Christian Church assessment: *sanctus Astion* (I 10; IV 34; 41; 42; 44; 45; 46); *beatissimus Astion* (I 15; II 17; III 20; 25; 31; 46); *beatus Astion* (II 18; III 19; 30; 33).

Aproximate birth date: 255.

Arrival at Halmyris: 273: *in Almiridensium civitatem devenerunt* (I 9).

Activity at Halmyris: 273-290: *decem et septem annos* (III 30).

Date of death: 8 July 290: *Pertulerunt autem martyrium Sancti atque athletae Christi, Epictetus presbyter et Astion monachus in Almiridensium civitate, octava die mensis Julii, temporibus Diocletiani tyranni, sub duce Latroniano* (IV 49).

Age at death: 35; *quasi triginta quinque annos aetatis agens* (III 20). The age is confirmed by the anthropological expertise[33].

15. BONOSUS

Name: *Bonosus* (IV 47).

Province and town of origin/activity: *Scythia*; most likely *Salsovia***:** *in aliam civitatem, quæ in proximo habetur, remeavit* (IV 47). There is no town (*civitas*) in the proximity (*proximo*) of Halmyris, except Salsovia. The text makes no specific remark on the affiliation of **B**. to Salsovia, or its name, but the priest appears suddenly inserted in the story, which suggests that he could have come promptly from the nearest town.

Position in the church hierarchy: *presbyter* (IV 47).

Religious orientation: *Christian*.

Stance as transmitter of Christian faith: *presbyter* (IV 47); presumably had an important role in baptizing *Astion's* parents, although there is no specific record of it[34].

Later Christian Church assessment: *sanctus presbyterus Bonosus* (IV 47).

Attitude, activity, and involvement in local societies: […] *Vigilantius una cum sancto presbytero Bonoso, ad eum* (i.e. *Evangelicus*) *perduxerunt, exponentesque illi per ordinem cuncta, quæ acta fuissent* […] (IV 47). The presence of **B**. and *Vigilantius*, quaestionarius, before *Evangelicus* to whom they gave a detailed report of the events shows that he either attended the trial of *Epictetus* and *Astion*, and therefore could have released valuable information upon the unfolding of the event, or the procedure requested a church official, considering that **V.** was not a church person. Astion's parents accompanied the two officials before *Evangelicus*, bishop, and most likely it was **B.** who asked for their consecration as *fideli Christi*. There is no evidence that **B.** was hiding from the authorities in Halmyris. It seems to have been involved in the preparations for the office of commemoration of *Epictetus* and *Astion* after 40 days, on the occasion of the arrival of *Evangelicus*.

Christian feature: *sanctus* (IV 47).

Aproximate date of activity: the years 80s-90s of the 3rd century.

Arrival at Halmyris: in a period shortly after the execution of *Epictetus* and *Astion*. The wording [...] *cum quadragesima dormitionis eorum dies illuxisset* […] (IV 47) shows his presence within 40 days from the execution act, but apparently before the arrival of the bishop *Evangelicus* at Halmyris.

Appearance: unknown.

B. PN, Celt; sizable number in the western and Danubian provinces; extremely rare in Moesia Inferior[35].

[33] Miriţoiu, Soficaru 2001-2003, 177-178.

[34] Popescu 1991, 202, n. 7.

[35] Holder I 488); var. Lat: *Boninus* (Schulze 1991, 32), *Bonius*, *Bononius*, (Schulze 1991, 32) *Bononianus*; OPEL I, 2005, 126, 141; in Lower Moesia: *Bonosus* (ILB 438.33; Butovo-Nedan); Scythia: *Bon*[*osus*], soldier in a 4th century list at Salsovia IGLR

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16. CAPITO

One can assume *tria nomina* on the stone; only the cognomen is preserved. **C**. is exceptionally spread among the gentilicia and frequently as cognomen in an old Italic environment in Republican times; considerable extension in the provinces[36].

17. CLAUDIA BERSILLE

Bersille is apparently a *hapax* among Thracian fem. PN[37]; the root *ber* is widespread in multiple combinations, especially place names; thr.-phryg. *sil* (-sil), *siltas* 'warm, pleasant'; see Σίλτα (Gr. neutr. pl) (place on the Propontis coast of Thrace; Strab. *Geogr*. VII frg. 55); see thr. ζιλᾶ 'wine'; *sille*, here as suffix apparently applicable to the root *ber* resulted in fem. PN. *Sile* is a fem. PN in itself: […] *senecta mea Crescentilla socra tua et Sile coniux tua Bitilla curavit filias* […] (Koinaré).

B. was a native woman of some condition[38]; citizenship was apparently acquired before she married *M. Ulpius Marcellinus* (no. 50) for she kept her gentilice.

18. CLAUDIUS CLEMENS

Clemens is common as Lat. PN[39]. **C**. held apparently Roman citizenship upon the dedication and both father and son (no. 20 could have dealt with the Halmyris garrison.

19. CLAUDIUS MARTINUS

Martinus is a common Lat. PN; originally a gentilice turned into a derivation of a theophoric cognomen (*Mars-Martius / Martialis / Martinus*; fem. *Martia, Martina*) The additional suffix *–inus* is common in children's names formed after the cognomina of the parents; few times recorded in Lower Moesia[40]. **M**. is second time recorded at Halmyris; see *Flavius Martinus* (no. 26). **M.** was *Claudius Clemens*' son and died aged 20. He must have been involved in some way in the local military. The inscription is second half of the 2nd century at the earliest as the writing suggests.

20. DIOCLETIANUS

D. is mentioned only incidentally and indirectly in a Greek hand written text on a brick. He appears as the father of a certain *Valeria* (no. 51). **D**. from Halmyris reproduces the Emperor's name, but as common PN is surprisingly rare in the provincial environment[41]. **D**. is a toponymic surname derived from Doclea, commonly called Dioclea, town in Dalmatia. There is little chance that our **D**. had a Dalmatian origin and the name given after his birth place.

21. EPICTETUS

Name: *nomine Epictetus* (I 1; III 16).

Town and province of origin: officially unknown; […] *dicamus quia Christiani sumus, et hoc nomen nobis, hoc genus, hoc patria; et nihil aliud sumus, quam very Dei cultores* […] (III 19).

Position in the church hierarchy: *presbyter in partibus Orientis*; *ephod sacerdotale;* (I 1); *presbyter* (IV 24; 47).

Religious orientation: *in servitio Domini*; *exercebatur in omnibus iustificationibus Jesu Christi* (I 1).

Stance as transmitter of Christian faith: *magister Epictetus* (III 19, IV 31).

Attitude and involvement in local societies: *religiosam vitam agens, et castus*; *multa signa ac prodigia […] in omnibus operatur* (I 1; 2); *sanctum Epictetum plura signa et prodigia in regione Scytharum, quam ea, quae in Orientis partibus fecerat, operari* (II 12); healer of ill/invalid persons: *plurima gratia adversus omnes infirmitates* (I 15) and on spot proselytizing the Christian faith in the local community (I 2-4); *Astion's* conversion to Christian faith (I 5-9); mass conversion: *plus quam mille animæ in illa die crediderunt* (I 14); *Vigilantius*, quaestionarius (II 22).

Christian feature: *sanctus Epictetus* (I 2; 4; II 8; 9; 10; III 12; 13; 15; 19; 31; IV 24); *beatisimus pater* (IV 30); *beatissimus Epictetus* (IV 24).

Later Christian Church assessment: *sanctus Epictetus* (I 2; 3; 5; 9; II 2; 15; 17; III 19; 20; 23; 30; 31; IV 42); *beatissimus* (II 14).

no. 272; Kajanto 1982, 275 (meaning); Minkova 2000, 128.

[36] Schulze 1991, 315; Kajanto 1982, 118-120; OPEL II, 1999, 33; Solin, Salomies 1988, 308). GLIH no. 32 with the bibliography.

[37] *Berilo*, m. recorded in an album of *sodalicii* of Bacchus from Nedan (Moesia Inferior) (ILB 438 II/13); thr I.-e *-behr-* 'to carry', 'to bear', 'to cut', 'to split', 'to cleave' or 'to carry' (Danov 1976, 53; Russu 1967, 132).

[38] Kretschmer 1910, 397-398; 1913, 351-352; Dechev 1976, 51-55; 443; Vlahov 1976, 64; ILB 153 (Koinare) cf. *Bersolus Licinianus* in Pannonia; OPEL I, 2005, 118; I^2, 289; AE 1972, 447; GLIH no. 19 with the bibliography.

[39] OPEL II, 63; III, 60-62; Solin, Salomies 1988, 315, 316; GLIH no. 27 with the bibliography.

[40] Schulze 1991, 486-487; OPEL III, 61; Solin, Salomies 1988, 359, 56; Kajanto 1982, 36, 55 counted 213 cases of bearers of the PN; used more frequently in the Celtic speaking provinces (OPEL III, 2000, 61) as dedicatory names; Kajanto 1982, 113-114; for Lower Moesia see: Minkova 2000, 205-206; ILB nr. 370, 438.50. An *Ulpius Martinus* is mentioned in 244-246 among the dedicators of an altar set for Philip the Arab at Cius (Gârliciu) ISM V 124; GLIH no. 27 with the bibliography.

[41] OPEL II, 1999, 101; GLIH no. 36 with the bibliography.

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Aproximate birth date: 230.

Aproximate date of activity: ca. 250-290.

Arrival at Halmyris: 273: *in Almiridensium civitatem devenerunt* (I 9).

Activity at Halmyris: 273-290: *decem et septem annos* (III 30).

Appearance: *statura procerus, barba prolixa, et splendore canitiei decoratus* (III 20).

Date of death: 8 July 290: *Pertulerunt autem martyrium Sancti atque athletae Christi, Epictetus presbyter et Astion monachus in Almiridensium civitate, octava die mensis Julii, temporibus Diocle tiani tyranni, sub duce Latroniano* (IV 47).

Age at death: ca. 60: *annorum fere sexaginta* (II 13).

E. is one of the two Christian martyrs executed at Halmyris. His origin is unknown. He lived *in partibus Orientis* (I 1). The term is purely technical at the time when the text was finally drawn up, presumably towards late 4th century. In 395, the official division of the Roman Empire in two partes had been accomplished and Notitia Dignitatum could emblematically record *omnium, tam ciuilium et militarium, in partibus Orientis*. The wording *in partibus Orientis* is repeated in III 25. The term is vague for the late 3rd and early 4th century: *temporibus Diocletiani* (I 1) to which the text refers. The city left by **E.** is not known although is twice recorded: *hac urbe*; *ab urbe* (I 9). *Urbs* means an important city. The context would suggest a city with a port wide opened to the sea: *ab urbe egrediuntur et descendentes navim* […] (I 9). The messenger who saw and recognized *Astion* while on trial was a person who sailed back to his city. That implied the existence of a port to the sea. The story alludes to an embarkment on a ship which was seemingly available next to the city: *egressi* […], *navim protinus condescenderunt, et navigare coeperunt* (III 26).

Apparently, the province of Scythia, *Scytharum fines* (I 9) was at an enough short distance and destination for an individual who intended to reach it by sea. Bithynia, with its traditional relation with eastern Lower Moesia and later Scythia (present day Dobrudja) (see below) is the nearest and best candidate to conjecture the province where **E.** must have lived before he came to Scythia; city (*urbs*) of origin: possibly Nicomedia.

E. was accused in front of the duke's retinue by some (ei) of the Halmyris community, of being: *maleficius et magus*; *multos per sua veneficia averterent iam a sacrificiis deorum* (III 19); probably accused also of exorcism and sorcery: *contra daemones maxima illis potestas tributa est* (I 15); arrested and kept in custody until the trial: *ferro vinctus, perduxit in custodiam carceris* (III 19); goads *Astion* to refute, before court, the customary questions: *nomina, provincia, genus*, *oriundus* and declare Christian affiliation (III 19); submitted to tortures and seclusion (III 20-24; 27); condemned to death by decapitation with sword: *capita eorum gladi amputari* (III 27); asks the executioner to execute first *Astion*: *ante se prius beatum percuterent Astionem* (III 30); executed shortly after by decapitation of *Astion* (III 31); buried in secret at sunset by the *questionarius* (inquirer) *Vigilantius* (no. 58).

Epictetus Ἐπίκτητος. Greek PN; m. considerably large geographical, temporal, and onomastic extension[42]; recorded alone, with affiliation or in combination with another PN in the Greek world. *Epictetus* (Lat.) widely spread in the European and Eastern provinces of the Roman Empire although much less numerous in records.

In Scythia Minor the name occurs apparently twice at Tomis: Ἰουλιανος Ἐπίκτήτου and Ἰουλιανος Ἐπίκτήτου [ν(έωτερος)] in a 3rd century catalogue of a collegium; νέωτερος suggests a young *Epictetus*, the father of another Iulianus[43].

22. EVANGELICUS

Name: *Euangelicus* (IV 47).

Town and province of origin: unknown.

Position in the church hierarchy: *cuius provinciae* (i.e. Scythia) *tunc pontifex et praepositus sanctarum Dei ecclesiarum, beatissimus Evangelicus habebatur* (III 26); *Christi pontifex* (IV 47).

Religious orientation: Christian.

Stance as transmitter of Christian faith: He apparently occupied the seat of bishop of Tomis.

Attitude and involvement in local societies: *cum quadragesima dormitionis eorum dies illuxisset, et Christi pontifex Euangelicus in urbem Almiridensium devenisset* (IV 47). His arrival, likely announced before, could have happened on the special occasion of the fasting commemorating the death of the two martyrs after 40 days.

Christian feature: *pontifex* (IV 47).

[42] LGPN I-V C s. v. Ἐπίκτητος; MAMA I-IV s. v. Ἐπίκτητος; for the European provinces: OPEL II, 119 s. v *Epictetus*, var. *Epictet*.

[43] ISM II 31 II_{24}; see also Ἐπικτήτω [τ]έκνω πρεσβυτέρ[ω...] in present day Atlanty (χωρίον Ἀραλλείων) (MAMA I 292) near Laodicaea Combustica (eastern Phrygia). For the name in general see: PLRE I 278 (provincial governors, 4th century).

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Aproximate birth date: unknown.

Aproximate date of activity: around 290[44].

Arrival at Halmyris: 290: *in urbem Almiridensium devenisset* (IV 47).

Activity at Halmyris: 290.

Appearance: unknown.

Date of death: unknown.

Age at death: unknown.

E. Gr PN. var: Εὐάγγέλιος, more frequently Εὐάγγέλιος; Lat. var: *Euangelis, Euangelius, Euangelus, Euangelianus*; significant extension in western provinces; rare in the Danubian provinces[45].

23. EUNOMIUS

E. appears exiled at Halmyris by 384/385 due to the information provided by Philostorgius; on that occasion the fortress was taken by surprise by the barbarians which crossed the frozen Danube. At the time of his exile at Halmyris, ordered by the Emperor Theodosius I, he was the leader of the radical wing of Arianism[46].

24. FLAVIA PRIMITIVA

P. was the wife of *Flavius Valerius* (no. 30). The given name, *Primitiva*, normally used as a cognomen is turned into a nomen while the gentilice fem. Flavia became praenomen; it unveils the peregrine origin of the woman, holding Roman citizenship after marrying *Flavius Valerius*[47].

25. FLAVIA TITIA

Flavia Titia, died aged 60. *Titia* fem. from *Titius*; old Roman origin. She bears the gentilice *Flavia<Flavius* meaning a generic adjectival name as 'belonging to the house of Flavii'. But here is a double gentilicia, as fem from *Flavius* and *Titius* of which the first is a praenomen turned into nomen, while the latter would apparently go here as a *cognomen* but in fact acts on a position of *nomen*. Double gentilicium without cognomina is a peculiarity of women in comparison with men. It might be that the second gentilicium was inherited from her mother[48], whose name remains unknown.

The wording of the text of the inscription denotes bad knowledge of the Latin syntax, either of the dedicator or of the lapicid. The text must have had run correctly as: *D*(*is*) *M*(*anibus*), *Fl*(*aviae*) *Titiae matri, vixit an*(*nis*) *LX, Ael*(*ius*) *Titianus, filiu*(*s*), *bene merenti posuit*[49].

26. FLAVIUS MARTINUS

M. was *Memmia*'s (no. 37) husband, as it appears from the Halmyris impressive cippus set upon his wife's burial. The cognomen rendering an initial theophoric name is here turned into a name. **M**. is second time mentioned in Halmyris (no. 19)[50].

27. FLAVIUS SECUNDUS

An epitaph set in the memory of the young *Memmia Marcia* (no. 37) records *Flavius Secundus* as D EIVS. The text contains no less than three demonstrative pronouns: (*pater*) *eius*, (maritus) *eius* and d(octor?) *eius*. The only reasonable position of **S**. in such situation would have been that of *d*(*octor*?) if the deceased was assisted till the end of her days by someone qualified; the wealthy family could afford it. If so, **S**. seems to have been very much involved in a interrelationship with the richly family of Memmii from Halmyris[51].

28. T. FLAVIUS SECUNDUS

T. Flavius Secundus was *Aelia Bendsi*'s husband (no. 1). He died aged fifty. His *tria nomina* indicates Roman citizenship. *Titii Flavii* are quite common and frequently borne from the Flavian epoch onwards, when a considerable number of individuals received Roman citizenship. *Flavii Secundi* are regular occurrence in the Roman Empire, particularly in the Danubian and African provinces[52]. *Tria nomina* also suggest that **S.** could have been a veteran of the legionary detachment billeted at Halmyris. It is little chance that no. 27 is one and the same individual with no. 28 who holds tria nomina which is nor recorded on *Memmia*'s epitaph.

[44] Popescu 1991, 214.

[45] LGPN I-IIB s. v; OPEL II, 1999, 124; PLRE I 286; *Evangelius* at Ratiaria (2nd century); Minkova 2000, 162.

[46] Philost. *Hist. Eccl*. X 6; Julicher 1907, 1131-1132; V. C. de Clercq in: N. Cath. Enc^2 5, 2003, 448-449 s. v. *Eunomius of Constantinople* (with the bibliography); Destephen 3, 2008, 295-342 s. v. *Eunomios* 1 (with the bibliography).

[47] GLIH no. 23 with the bibliography.

[48] Schulze 1991, 425; OPEL IV, 123-124; Solin, Salomies 1988, 187, 412; Minkova 2000, 89; see the aspect largely approached by Kajanto 1977, 155-157.

[49] GLIH no. 21 with the bibliography.

[50] GLIH no. 25 with the bibliography.

[51] GLIH no. 25 with the bibliography.

[52] Alföldy 1969, 38-40; Minkova 2000, 51; OPEL II, 1999, 145-146; IV 60-61; Solin, Salomies 1988, 80, 399; GLIH no. 22 with the bibliography.

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29. FLAVIUS VALERIUS

Flavius Valerius was the mayor of *vicus classicorum* situated in the nearness of the Halmyris fort. Both are associated gentilices turned in *praenomen* and *nomen* respectively[53].

30. FLAVIUS VALERIUS

Another *Flavius Valerius* appears as the husband of *Flavia Primitiva* (no. 24). As the votive altar of the mayor is dated 209, while the *Primitiva*'s husband lived 70 years the assimilation of the two *Flavii Valerii* (no. 29 and 30) is highly unlikely.

31. HERACLIUS

Heraclius (Ἡρακλῆς) is a Greek PN[54]. **H.** is also recorded at Halmyris under a slightly corrupted form: (*H*)*Aracl*(*a*) (no. 12). **H**. is the infant who died aged 3 in the *Nepotianus* family.

32. HERMES

H. was father of a certain *Secundus* (no. 44) recommended by *Valerius Valerinus Constans*, to enter the army (no. 56). **H**. is a theophoric Greek PN, widely spread in the provincial environment and normally occurring in a Greek speaking region[55].

33. IULIANA

I. was *Nepotianus*'(no. 40) and *Artemidora*'s (no. 13) daughter, still a baby when she died, aged 3. She was of the same age with her deceased brother *Heraclius* (no. 31). As PN, **I**. circulates broadly in a later period although *Iulianus /Iuliana* as a cognomen derived from the gentilicium *Iulius/ Iulia* are detectable back to at least in early mid 1st century AD[56].

34. LATRONIANUS

Name, personality and ancestry: *Latronianus* (III 20; 21; 23; IV 32).

The PN is known, but rare. It seems Etruscan and old Italic in origin used commonly as a cognomen[57].

Position in the late Roman official hierarchy: *dux* (II 18; III 19; 20; 21; 23; IV 32; 41; 49). The official titulature was *dux provinciae* which actuality is mentioned in the text in an ongoing account of the events as *dux provinciae istius* (IV 41). According to the editor, **L**. was the dux of the province of Scythia at the time of the Halmyris episode of the execution of the two Christian martyrs, *Epictetus* and *Astion* (IV 49): *dux Scythiae*.

The name appears among significant families in the army and administration of the Roman Empire in the 2nd century:

Haterius Latronianus: *tribunus militum (laticlavius)* in the legion *II Adiutrix* at Aquincum, the son of *Tib. Haterius Saturninus*, *legatus Augusti pro praetore (Pannoniae Inferioris)* (161-164). The earliest references are two votive altars from Aquincum:

1. [*Di*]*s Militaribus* / [*S*]*alutaribus* / [*Hat*]*erius Saturn*/[*inu*]*s leg*(*atus*) *Augg*(*ustorum*) / [*pr*(*o*)] *pr*(*aetore*) *cum* / [*Lat*]*atroniano* / [*f*]*il*(*io*) *trib*(*uno*) *mil*(*itum*)[58];

2. *I*(*ovi*) *O*(*ptimo*) *M*(*aximo*) *et di*(*i*)*s de* / *abusqu*(*e*) / *Ti*(*tus*) *Haterius Satur/ninus leg*(*atus*) *Augg*(*ustorum*) / *pr*(*o*) *pr*(*aetore*) *sod*(*alis*) *Aug*(*ustalis*) *cum* / *Latroniano fil*(*io*) *trib*(*uno*) / *mil*(*itum*)[59];

A third dedication to *Deus Invictus pro salute familiae* set by *Haterius Saturninus* which mentions his father, *Arpocras*, envisages implicitly his son, *Latronianus*[60].

Deo Invicto / pro salute famili(*a*)*e / Ti*(*beri*) *Hateri Saturnini* / *leg*(*ati*) *Augg*(*ustorum*) *pr*(*o*) *pr*(*aetore*) / *Arprocas pater* / *posuit*.

Flavius Iulius Gemellus Latronianus:

An inscription from Xanthos[61] set around 242/243 records *Ti. Pollienus Armenius Peregrinus* who governed the province of Lycia-Pamphylia. *Fl. Latronianus* (Φλ. Λατρονιανος), ὑπατικός ποντίφεξ, and ἔπαρχος Ῥώμης shortly before 243 is *Flavius Iulius Latronianus*, consul *suffectus* under Severus Alexander[62] and the maternal grandfather of *Polliena Honorata*, the daughter of *Ti. Pollienus Armenius Peregrinus*, consul *ordinarius* in 244 and the paternal granddaughter of *Ti. Pollienus Auspex*, consul *suffectus* between 212/222.

[53] OPEL II, 1999, 145-146; IV, 144-146; Solin, Salomies 1988, 80; 197; cf. Kajanto 1977, 155; GLIH no. 25 with the bibliography.

[54] Pape, Benseler 1911, 147; LPGN I, II, IIA. s. v; Hornblower, Matthews 2000, 58, 59, 66, 136; OPEL II, 1999, 177; GLIH no. 28 with the bibliography.

[55] GLIH no. 28 with the bibliography.

[56] Kajanto 1982, 31-390; GLIH no. 28 with the bibliography.

[57] Solin, Salomies 1988, 349; OPEL II, 1999, 20; Schulze 1991, 178.

[58] CIL III 3473; Dobó 1968, 63 no. 43[1].

[59] AE 1962, 118; Dobó 1968, 63 no. 43[4].

[60] CIL III 3479.

[61] IGRR III 618=ILS 8841; Alföldy 1969[2], 53-54 (Xanthos, Lydia).

[62] Groag, PIR[2] III, 156-157, no. 297.

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A *Flavius Latronianus* was *pontifex* in Nemausus: *C*(*aio*) *Fl*[*avio*] / *Latr*[*oniano*] / *pont*[*ifici*…] / *e*[…] / *et* […][63] and presumably is to be equated with *Fl. Latronianus* from the Xanthos inscription.

The l. 85 of the new fragments from *Acta ludorum saeculorum* yields the name *Flavius Iulius Latro* who was among the singers of aristocratic origin in the secular games (*ludi seaculorum*), in 204. The individual is identified by C. Hülsen with the later *Flavius Iulius Latronianus* from the Xanthos inscription[64].

L. Gemellus Latronianus is recorded among *clarissimi pueri* in an early 3rd century decree of *concilium provinciae Mauretaniae Caesariensis*[65]. He could have been a young blood relative from the same aristocratic family of *Flavius Latronianus*.

An ascendancy line from *Haterius Latronianus* of 161-164 to the mid 3rd century *Flavius Iulius Latronianus*, although both of senatorial origin, could be theoretically possible, although practically hardly demonstrable, as long as we do not know who the father of the latter was. Theoretically *Haterius Latronianus* could have been the father of *Flavius Iulius* who was a teenager during his performance in 204 as a singer in *ludi saeculorum* and must have been born in the late 80' or early 90' of the 2nd century. A correlation between *Fl. Latronianus*, the priest at Nemausus (Nimes) and the consular *Fl. Latronianus*, priest and *praefectus Urbi* in 243 is on the other hand possible and even probable, as the identification of the same individual in the three instances cited above is likely: singer in *ludi saeculorum* (204) – priest in Nemausus – *praefectus Urbi* in 243.

The place of *L. Gemellus Latronianus* in this construction is again hard to disentangle, as long as he was a *clarissimus puer* in early 3rd century and therefore a contemporary to the young *Latronianus* in 204. Could have he been from another stem and therefore were there two branches of the Latroniani family? The future discoveries will settle the matter.

L'. *gentilicium* is not recorded in *vita Epicteti et Astioni*. As an official of the Roman administration, **L**. is not recorded in any of the *vitae martyrium* among the names of the executive officers involved in trials against Christians. If, by mid 3rd century, *Fl. Iulius Latronianus* was in his 50' s, the duke *Latronianus* could have been his son, in his forties in 290, when he visited Halmyris as *dux*.

According to the Tetrarchic program of restoration of the Empire' frontier defense, **L**. visited the recently created province of Scythia, an important strategic segment at the Lower Danube. Halmyris was planned to be inspected. The ducal official visit seems likely to have been announced before. The word *subito* (unexpectedly) applied to his visit is a later insertion of the editor who tried to create suspense, edginess and tension in the story.

The **L**.' arrival began with a three days inspection: *per triduum opera publica et imperialia ministeria quae ibidem erant pervidisse* (III 19). The scrutiny envisaged the material aspect (*opera publica*), the ongoing works of reconstruction of the fortress and other local structures (like the port installation) and the condition and state of the administrative and military organization (*imperialia ministeria quae ibidem errant*) as well.

As noticeable from the text, the denunciations against *Epictetus* and *Astion* were made during his three days inspection. The trial followed in the fourth and fifth days from the duke's arrival. Whether or not the visit was planned to last more than three days is difficult to estimate, but the trial could have required a prolongation with at least two days.

The involvement of L. in a trial in the civil field was normally duty of a *praeses*, in his quality of civilian governor. This latter stance may be reasonable evidence that L. could have been *dux et praeses*, which would entail at this early date a concentration of the military and civil authority in one hand.

A fifth day (III 22: *post quintam demum diem*) seems to have marked the true end of the trial. It followed a seclusion of the martys in the dungeon for thirty days (III 27: *expleto numerum triginta dierum*) could have happened and the order has been given by **L**. personally (III 24: *imperat* […] *in custodiam carceris denuo perducerent; iussit ut per XXX dies nullus ad eos introiret*). Taking for granted the passage of the thirty days more of the duke's presence at Halmyris, this could have happened only if a serious military or administrative situation in the area required his presence and certainly not for a simple trial and in expectation of a verdict. It is clear from the passage relating the madness and extreme folly of **L**. that it has nothing to do with the aftermath of the execution of the two Christians. The editor makes any association and introduces no wording which could have been

[63] CIL XII 3220.

[64] Hülsen 1932, 385, 387, 394; AE 1932, 70.

[65] AE 1902, 15= ILS 6871); *]/li Albini patroni pr*[*ovin*]*/ciae Mauretaniae Cae*[*sarien*]*/sis Fl*(*avi*) *Val*(*eri*) *Festi et L*(*uci*) *F[3]/melli Latroniani c*(*larissimi*) *p*(*ueri*) */ decreto concili*(*i*) *prov*[*inciae*] / *Mauretaniae Caesar*[*iensis*] */h*(*onore*) *r*(*ecepto*) *i*(*mpensam*) *r*(*edimit*).

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related to this issue. We might assume, as a possibility, a serious delay or hindrance in implementing the program of the general rebuilding in view of a possible higher level (imperial?) inspection.

The passage on the collective molestation and chastising of duke and finally his death (IV 32: *violenter spiritum exhalavit*) in a small room of the praetorium is a pathetic, mendacious, and false story. Such an exceptional event would have meant rebellion against the Roman state and punished severely by the central authority. There is no evidence in later sources and there is no substantiation in the archaeological data of such incident at Halmyris.

On the contrary, L. seems to have continued his brilliant career. *A. Domitius Latronianus* is recorded in two inscriptions from Panhormus (Palermo), Sicily, and in literary sources as well, in early years of Constantine[66].

L. receives a letter from Constantine I (January 314): καὶ σοὶ γράψαι ἐνομίσαμεν ἵνα λαβὼν παρὰ τοῦ λαμπροτάτου Λατρονιανοῦ τοῦ κονρήκτορος Σικελίας δημόσιον ὄχημα[67] [...] *we have thought proper to write to thee also that thou shouldst secure from the most illustrious Latronianus, corrector of Sicily, a public vehicle* [...]'. The same *Domitius* is mentioned five years later fulfilling the function of proconsul of Africa[68].

A later and apparently the last descendant of one of the branches of the Latroniani family was the famous poet in Spain, *Latronianus*. Jerome, in his work *On Illustrious Men* (*De Viris Illustribus*) dedicated him a special entry which describes him as "*a man of great learning and worthy to be compared with the ancients as a composer in verse*". At that time, Jerome knew that the works of the poet Latronianus were still in existence. He was associated with the sect of Priscilianism and executed, along with Priscilian and several others, at Trier in 385. As such, he is considered among the first to be executed as heretics in the history of Christianity[69].

35. MARCELLINA

M. was **A**.'s mother: *mater vero de illustrium genere et Iuliani senatoris extitit filia* (I 5). The editor pictures M.'s role at Halmyris apparently more energetic than her husband's. She appears to have mourned more the disappearance of her son (I 9) and is very active in inquiring about the circumstances of his disappearance (IV 34); she has some obscure points in front of the *Vigilantius*'s offensive proselytism (IV 35-36). *Marcellina*, fem. from *Marcellinus*; common Latin PN widely spread in the Roman provinces[70].

36. MARCIUS [---]

M. was the mayor of *vicus classicorum* in 200 AD. The name, as a theophoric based var. *Marcius-Marcia* is relatively frequent and has a long tradition in the Roman onomastics**.**

37. MEMMIA MARCIA

M. seems to have been of high social status, as showed by the impressive gravestone set by father (no. 38), whose name she inherited, husband (no. 26) and d(octor?) (no. 27). She died aged 19, apparently of a merciless disease, as long as a doctor presumably looked after her until she passed away.

Marcia, as PN, is second time recorded at Halmyris (no. 2). *Memmia Marcia* is an association of two gentilices: *Memmia* and gens *Marcia*; the latter is turned into a *cognomen*. Both gentilices are widespread and well represented everywhere in the provinces with an emphasis on North African districts[71].

38. MEMMIUS MARCUS

M. was *Memmia Marcia*'s father and one of the three persons who buried and set a grave stele for her. The theophoric name, *Marcus*, is second time recorded at Halmyris (no. 37); here it was

[66] Panhormus (Palermo), Sicily: CIL X 7284=ILS 677 (winter of 313/314): [*Res*]*titutori libertatis* [*et*] *fundatori public*[*cae se*]*curitatis d*(*omino*) *n*(*ostro*) *L*[*icin*]*iano Licin*[*io*] *pio felici invicto Aug*[*usto*], Domitius Latronianus, v[ir clarissimus], corr(ector) p[rovinciae Siciliae d]evotus *n*(*umini*) *maiestatiqu*(*e*) *eius* (Tissot 1885, 211-212; A. Pallu de Lessert 1969, 32). Panhormus (Palermo, Sicily): IG XIV 296: [τ]ῆς πρὸς πάντας ἀνθρώπ[ους]/[ε]ὐνοίας πειραθέντες/[κα]ὶ τῆς ἀνυπερβ[λ]ήτου χρη[στό]-/[τητος] μετασχόντες/ [Δ]ομιτίου Λατρωνιανοῦ/τοῦ λαμπρ(οτάτου) ἐπανο[ρθωτοῦ]/[ἡ] βουλὴ καὶ ὁ δῆμος/εὐν[οίας —]Ω[— —]/[— — — χ]άρι[ν].

[67] Euseb. *Hist. Eccl*. X 5, 21-24.

[68] Carthago: CIL VIII 1016=12465 (a. 319): *D(omino) n(ostro) Constantino Fl(avio) maximo, pio, felici, invicto, Augusto, Domitius Latronianus, v(ir) c(larissimus), proco(n)sul p(rovinciae) A(fricae) et Vettius Piso Severus, v(ir) c(larissimus), cur(ator) reip(ublicae) Kart(aginensium) numini eius semper dicatissimi* (Tissot, 1885, 211-212; Seeck 1925, 980; Pallu de Lessert, 1969, 33).

[69] Hillar 1997, 59; Halton 1999, 157.

[70] OPEL III, 2000, 53; OPEL III, 2000, 56; Schulze 1991, 188, 456; GLIH no. 9 with the bibliography.

[71] Groag-Fluss 1932, 602-637; 637-638; Schulze 1991, 424; Solin, Salomies 1988, 424; OPEL III, 2000, 75; Minkova 2000, 65; GLIH no. 25 with the bibliography.

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turned into a cognomen; well enough represented in Lower Moesia[72].

39. MARCUS PAPARIO

P. was a mayor of *vicus classicorum*. The PN could derived apparently from the frequent middle and north Italic name, *Papirius*, a Latinized form originating from the Etruscan[73].

40. NEPOTIANUS

The PN is a later construction in date; recorded at Junuschilar, in Thrace, where a *circitor* bore this name; more frequent in western provinces[74]. The way the cippus is conceived, seems to indicate that **N**. have died at the same moment with his children.

41. PAPIRIUS[---]

Papirius is most likely restoration in l.2. If so, we have apparently the genuine PN of old Italic origin[75]; frequent especially in mid and north Italy from minor gens in Rome, *Papiria*; it has a certain circulation in Italy; it occurs occasionally in Lower Moesia[76].

42. PUBLIUS POMPEIUS

Pompeius was the mayor of the *vicus classicorum* in 171 AD; frequent Roman PN[77]; only two cases known in the 2nd century Lower Moesia[78].

43. QUINTUS

Q. is normally a praenomen and would imply the existence of the tria nomina and consequently Roman citizenship[79].

44. SECUNDUS

S. was *Hermes*'s son (no. 32); he was recommended by *Valerius Valerinus Constans* (no. 56) to enter the local detachment from the legion I Iovia billeted at Noviodunum in late 3rd century: λεγιώνη(ς) [πρεί]μα(ς) ’Ιωβ(ία)ς[80].

45. SEXTUS

S. together with **Q**. (no. 43) were apparently the sons of Capito (no. 17) to whom they set the gravestone. As Capito is a cognomen and Sextus and Quintus praenomina both applicable usually to tria nomina, the citizenship for all three would be the most likely option[81].

46. ΣΙΜΗ

Σίμη, Gr. fem. PN[82]. Σίμη could have been a local Greek woman who acquired the vase (*tribaion*) from *Amaios* (no. 11) at Halmyris. The inscription seems to have been written when the transaction was made.

47. SISSO

Sisso/Siso, m. PN is rare; apparently Thracian in origin; cf. *Zizo*, Ζειζας, *Sises*, *Sissa*[83]. It might be close to *Sisius/Sisio* with a derivation *Sisidius*, both attested in Italy. A *Sise* at Oescus (Gigen), and an *Aelius Sissa* at Securisca (Cherkovitsa)[84].

48. SOSSIUS SOSSI

S. is the one of Halmyris mayor's name. *Sossius* (m.)/*Sossia* (fem.) is rare as Latin gentilice[85]. The PN is known in Dacia Superior at Micia: *Lucius Sossius Claudius Sossius*; a *Sosius Longinus*, veteran discharged from legio V Macedonica is known at Troesmis. On the Halmyris inscription,

[72] Schulze 1991, 424, 464; OPEL III, 2000, 57; GLIH no. 25 with the bibliography.

[73] Schulze 1991, 331 n. 5; OPEL III, 2000, 123; Solin, Salomies 1988, 137: *Papasa>Paperis* (CIL XI 2440); *Papisius* (CIL III 2876); *Papirius* (CIL XI 2171); *Paperius* (CIL IX 1024), from where the slightly corrupted *Paparius*, or as a hybrid form between the Greek Παπαῖος, Παπίριον, Παπίριος (Pape-Benseler 1911, 1129; LPGN III A 150) and the Latin *Papirius* (cf. Plut. *Cam*. 22); GLIH no. 6 with the bibliography.

[74] Kajanto 1982, 31-32; OPEL III, 2000, 98; Solin, Salomies 1988, 363; CIL III 12444 (*circitor*); Minkova 2000, 219); Alföldy 1969, 251; GLIH no. 28 with the bibliography.

[75] Schulze 1991, 86, 131.

[76] Mócsy 1970, 214; OPEL III, 2000, 123; Solin, Salomies 1988, 137. A *Papirius Mes*[*ius* (?)] is recorded on the Troesmis legionary *laterculum* of 134 (ISM V 137 VII 3); *Papi*(*rius*) *Valens*, *tubicen* in Almus (Lom) in second half of the 2nd century (CIL III 14409; AE 1902, 130; Gerov, 1954, no. 16; Minkova 2000, 75; *Papirius Celer*, at Tomis (ISM II 129); GLIH nr. 28, 29 with the bibliography.

[77] OPEL III, 2000, 150-151; Solin, Salomies 1988, 146.

[78] ILB 84, 431, 433; Minkova 2000, 77. In Tomis (ISM II 129), a *T. Ailius Pompeius* was born in Tio (=Tiana, Cappadocia?); *L. Pompeius Celer* (ISM III/1 nr. 86) is recorded in Dacia. GLIH no. 8 with the bibliography.

[79] GLIH no. 32 with the bibliography.

[80] GLIH no. 28 with the bibliography.

[81] GLIH no. 32 with the bibliography.

[82] Pape, Benseler 1911, 1392; A Σίμη Απατουρίου apparently born in Histria (Ἰστιανή) in Athens (LPGN IV (3); Avram 2013, 177 nr. 2115) (1st BC-1st AD century); a total of 17 such PN are known thus far in the Greek world (LGPN I-IV s. v.); GLIH no. 106 with the bibliography.

[83] cf. OPEL IV, 2002, 85; Gerov 1952-1953, 44; Dechev 1976, 178; 449-450; Minkova 2000, 225.

[84] CIL VI 26606a; Schulze 1991, 94 (Italy); ILB nr. 68 (Oescus); ILB nr. 133 (Securisca); GLIH no. 31 with the bibliography.

[85] Schulze 1991, 425; OPEL IV 89; Solin, Salomies 1988, 174.

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Sossius is common for both father and son; used probably in this case as a *nomen* recording the filiation but not a *praenomen*[86].

49. TITUS COLLUMELA

Titus and *Collumela* (sic!) (*Titus Collumela*); note *Collumela* instead of *Columella*, which recalls the famous Roman writer, *Lucius Iunius Moderatus Columella*. In this remote provincial background, the Halmyris *cognomen*, *Collumela* (sic!), was turned into a *nomen*. *Collumela* (sic!) unveil his initial peregrine origin[87].

50. MARCUS ULPIUS MARCELLINUS

M. displays one of the rare cases of *tria nomina* at Halmyris, which labels him a Roman citizen. The imperial gentilice, *Marcus Ulpius*, indicates normally Roman citizenship during Trajan's reign. A *Marcus Ulpius* is unique thus far at Halmyris, which consequently entails an early date of the inscription, during or shortly after Trajan's reign. He might have been either in active service in the legionary detachment of V Macedonica from Troesmis billeted after 106 in the Halmyris fort or a civilian official in the administrative service, although there is no clear indication for any of these positions. It seems unlikely that he had been discharged when the inscription was set, otherwise he would have had indicated the common formula *militavit.*

M. as cognomen comes obviously from Marcellus having added the suffix *-inus* formed from the father's *gentilicium*[88]; the practice seems common already by early 2nd century which, in the long run, increased the incidence of extended forms. Marcellus becomes Marcellinus as a more common personal name in a later epoch[89].

51. VALERIA

V. was the daughter of *Diocletianus*, as recorded on a hand written brick (see nr. 20); she presumably owned or worked in a bone workshop (οστοπ[οι]όν). She is the mysterious personage urged by *Valerius Valerinus Constans* from the legion I Iovia to give (something) to that who pierces. The wording is vague, the reading ambiguous, and so the meaning is rather confusing[90].

52. VALERIA NENE

N. from Halmyris was *Valerius Ponticus*' wife (no. 54) and the mother of Valerius Valens (no. 53). *Nene* possibly var. from Νανα, Νανας fem. PN; Phrygian or Bithynian in origin; apparently used as nickname, Αὐρηλία Σαβίνα ἡ καὶ Νηνης (Nicopolis ad Istrum)[91]; as var. (*Nene*) is rare in the Roman Empire[92].

53. CAIUS VALERIUS LONGINUS

Caius Valerius Longinus was *veteranus*, when he set the gravestone in the memory of an unknown person who died at 32. He had held previously the post of *b(eneficiarius)* most likely of the *legatus legionis V Macedonicae*. Two *Valerii Longini* appear twice in the Troesmis *laterculum* of 134[93]. He could have been either one of those individuals or quite a different one. Normally, if one of the *Valerii Longini* at Troesmis is our **L**. the *laterculum* should have contained the indication *ex beneficiario* as in some cases. It is preferable thus to consider **L**. at Halmyris as a third *Valerius Longinus* in the legion. **L**. settled as a veteran and Roman citizen in the *canabae* of the Halmyris fort. **L.** has intense circulation and usually employed as a *cognomen*, although it is used sometimes as a *nomen gentile*[94].

54. VALERIUS PONTICUS

P., was *Nene*'s wife and *Valerius Valens*' father; Gr. PN[95] taken over on a large scale basis in the Roman onomastics and circulated as a *cognomen*; the incidence of PN is remarkable everywhere, although not in great number[96]. There is no sign

[86] IDR III/3, 105; 107 (Micia); ISM V 137 II 18 (Troesmis); GLIH no. 7 with the bibliography.

[87] GLIH no. 6 with the bibliography.

[88] Kajanto 1982, 36-37.

[89] Dean 1916, 36-38; Kajanto 1982, 31-39; 167-169; OPEL III 2000, 53; Solin, Salomies 1988, 357; GLIH no. 19 with the bibliography.

[90] GLIH no. 36 with the bibliography.

[91] IGB II 687.

[92] OPEL III, 2000, 97; *Nana* originating from Pontic Heraclea (Thrace) (1st c. AD) (Avram 2013, 127 nr. 1438) in Athens; var. of the name seems rather spread in the Thracian town: *Nais, Nanous*; Avram 2013, 127, nr. 1437, 1439; inscriptions at Sacidava (Gostar 1964, 89-90) and Chomakovtsi (IGLR, 188; ILB 163); var. Νάνα/ Νάννα (Phrygia, Lycia, Pisidia, Cilicia, Isauria); Sundwall 1913, 165-166; *Nana*, *Nanea,* Νάνας (fem. Phrygia, Cilicia) Νήνας are somewhat frequent. *Nina*, *Ninna*, *Ninnita*, *Nonna* martyrs in Thessalonica, Byzantium, Noviodunum, and Nicomedia; Dechev 1976, 231-232. A composite m. Νεινίσος at Resovo (Macedonia); Dechev 1976, 238; *Fl(avia) Nona* at Tomis (first third of the 2nd century); IMS II, nr. 160; GLIH no. 26 with the bibliography.

[93] ISM V 136, col II l. 22; VI 18.

[94] OPEL III, 2000, 31; Solin, Salomies 1988, 353; Minkova 2000, 63; GLIH no. 18 with the bibliography.

[95] Pape, Benseler 1911, 123-124; LGPN I 381; II 376; III 372; Avram 2013, 16, no. 161; 150, no. 1880; 224, no. 2570; 316, no. 3258.

[96] OPEL III, 2000, 152-153. Except our case, there are two *Pontici*, *Flavius* and *Iulius* recorded in the Troesmis legionary laterculum of 134 (ISM V, 137 VI 15; IX 3). An entire *Ponticus* family from Amastris (Bithynia) was in the military at Troesmis (ISM V 186); GLIH no. 26 with the bibliography.

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yielded in the text of the inscription that **P**. and his wife would have died, in which case Valens, set the dedication on a certain a occasion which difficult to disentangle (arrival or leaving the garrison ?).

55. VALERIUS VALENS

V. was the son of *Ponticus* (no. 54) and *Nene* (no. 52). The combination of the two PNs knows dozens of example and is spread everywhere and utterly common[97].

V. was soldier (miles) in the legion I Italica of which a sizable part was dispatched at Troesmis, most likely in the detachment garrisoned at Halmyris after167.

56. VALERIUS VALERINUS CONSTANS

C. was brother(-in- arms) (φράτερ) with someone unknown to whom he recommends *Secundus* (the son of) *Hermes* [...]'. **C**. must have held an important position in the local garrison to make his word trustful in the eyes of the commander[98].

57. VICTOR

V. was the youngest child of the *Nepotianus*' family. He died aged 2[99].

58. VIGILANTIUS

Name: *Vigilantius* (Lat.); Βιγελάντιος (Gr.): *unus*[…] *nomine Vigilantius* (III 22); typical late Roman PN[100]; Even in late period the name is rare, although not uncommon; apparently inexistent in early epoch[101].

Birth date: unknown.

Appearance: unknown.

Age when mentioned: unknown.

Town and province of origin: possibly of local origin.

Official position at Halmyris: *quaestionarius* (III 22). He could have been among the officials who arrested *Epictetus* and *Astion* at *Latronianus*' order: (Latronianus) *continuo imperat aliquos ex quaestionariis ut post solis occasum pergerent ad habitaculum Sanctorum et comprehensos eos, ferro vinctos, perducerent in custodiam carceris.*

There were several *questionarii* at that time at Halmyris. They were high ranking *principales* in the Roman army, attached beside any high military authority: military commanders, governors, military units, (legions, auxiliary) and other officials; they fulfilled duties in criminal justice and criminal courts (military) during the trials[102]. Attributions of *quaestionarii* or *a quaestionibus* were to interrogate the subjects submitted to trial. Here, the taking into custody was done apparently by quaestionarii.

Activity at Halmyris before and after the execution of *Epictetus* and *Astion*:

V. appears as one of the interrogators (*unus … ex quaestionariis*) who addressed *quaestiones* to *Epictetus* and *Astion*; it is not clear in what position he fulfilled his function. There are some rather confusing instances in which **V**. appears. In one passage (IV 32) which deals with the post execution period, **V**. is accompanied by his entire household: *veniens Vigilantius cum omni domo sua*; the presence of his family is again recorded in III 22: *et cum omni domo sua*. **V**. seems to have had a home at Halmyris: *infra domum…decantare* (III 22); Domus, in the context described, means family and servants. If he was part of the duke's staff and came at Halmyris in official duty, his 'domus' would not have existed. The repeated *cum omni domo sua* bears the key. **V**. could have been indeed one of the *questionarii* of which Latronianus could have made use of any time, not in the staff the duke came with, but a principalis in the sizable legionary detachment billeted at that time in Halmyris.

V. seems to have been one of the interrogators of *Epictetus* and *Astion*. The editor alludes to a presence of **V**. in the prison where the two Christians were imprisoned: *perveniens ad beatissiomos Martyres in custodia carceris* (III 22). This is a valuable and the only evidence that direct questions were addressed in the lock-up room and the process was carried out by **V**. as the main interrogator. He could have found out important details which made possible the drawing up of the final report presented to the duke. *Astion* seems to have been the weak link and he possibly revealed facts without which we would not have had information

[97] GLIH no. 26 with the bibliography.

[98] GLIH no. 36 with the bibliography.

[99] GLIH no. 28 with the bibliography.

[100] Kajanto 1997, 103-111 in: Stefano Manzella ed. 1997.

[101] The name *Vigilantius* was restored in *Vig*(*i*)*lantius* by Solin, Salomies (1988, 116, 359, 422). *Comes domesticorum* (*equitum*?) (Zos. V 36, 3) (408) and *magister equitum* (409) in the West (Zos. V 47, 2-3; 48, 1) Enßlin, 1958, 2131 nr. 1; PLRE II, 1999, 1165) (early 4th century). Metropolitan bishop in Larissa, Thessaly) (446), participant in the Ephesus Synod (449) and Chalcedon Council (Enßlin RE 1958, 2132 nr. 2) (second half of the 4th century). Priest in Barcelona, born in Aquitania secunda (Hieron c. Vig 1) in Bethlehem in 396 (Hieron, c. Vig. 11) (Enßlin 1958, 2132 nr. 3); 5th or 6th century barber (*tosor*) recorded on a mosaic at Aquileia, donor of a modest sum of money for the making of the pavement of the martyrium of S. Cantianus (PCBE 2, 2296).

[102] Marquardt 1891, 294, n. 7.

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on their origin, activity previous to the arrival at Halmyris and facts occurred during their presence in the area.

V. appears as the central character in managing the situation post execution of *Epictetus* and *Astion*. The text editor states **V**.'s self conversion to Christianity (III 22) and that he overtly defied the duke by asserting his new faith. Later he would have received in jail the benediction and the sign of cross from the martyrs. After the execution of the two individuals, he buried their decapitated bodies, received *Astion*'s parents and converts them to Christianity, relates a detailed account on the events to *Evangelicus*, the bishop of the province, and finally leaves; *Astion*'s parents bring him and *Bonosus*, to their own city of (IV 32-49).

V.s' defiant attitude towards the duke is a late, false account inserted by the editor to justify the further picture drew for him in taking care of the burial of *Epictetus* and *Astion* and becoming a fiery propagator of Christianity. Had **V**. had that insolent position: *voce publica proclamare* [...] *ego Christianus sum, o tyranne Latroniane*[...] he would have been easily charged of insubordination and executed like many other people in the military experienced. There is on the other hand a piece of conflicting information in the false account introduced by the editor which relates that the bodies of the two individuals were picked up furtively (*occulte*) at sunset, although with big pump: *cum omni domo sua et cum aliis Christianis* (IV 32) and buried. The way in which the burial was made contains bogus elements. In such cases the common interments were fast, usually prudently and far from the eyes of authorities, whereas Epictetus and Astion were buried: *cum hymnis et psalmis, et cum magna devotione* (IV 32).

In general, one might think that the Chapter IV was entirely fabricated by the editor containing many fictitious, and few historical elements, in which **V**. was turned into a firsthand Christian character destined to manage *Epictetus*' and *Astion*'s post mortem situation. **V**'s name appears 26 times in the text.

59. VITALIS

V. was the oldest of the four brothers deceased at a very early age in the *Nepotianus*' family. He died aged 5[103].

60. VIVENTIA

V., the only living daughter of *Artemidora* and *Nepotianus*; commonly a PN of later date but apparently extremely rare as a fem. PN[104].

[103] GLIH no. 28 with the bibliography.

[104] Kajanto 1997, 107; OPEL IV, 2002, 178; ILIug nr. 2369; GLIH no. 28 with the bibliography.

Commentary

The literary and epigraphic analysis of the Halmyris PN yielded evidence for 60 individuals. They were permanent or temporary adult or young residents of the local society, recorded during their lifetime or upon decease in a large variety of social instances, official position in the local administration, or military all indicative for the dynamics of the current evolution in the region.

I. Origo and social mobility

The onomastic picture at Halmyris mirrors the three main linguistic[105] components in the area otherwise perceptible both at smaller scale, in the territory between the Danube and the Black Sea and, in a larger degree, in the all eastern Balkan provinces. The bulk of the Halmyris PN yields cases of Greek, Thracian, Thraco-Bithynian/Phrygian, and Roman names.

Place names indicated as possible *origo* for the individuals which temporarily or permanently inhabited Halmyris occurs in three cases: the *Alexander-Marcellina-Astion* family (no. 10, 35, 14) and *Epictetus* (no. 21) as well. Their *origo* is specifically indicated *ex partibus Orientis*, although even so, the term is vague.

No. 3, *Ael*(*ius*) has presumably an indicated *origo*: *Rat*[*iaria*?]. The Danubian colony of Upper Moesia was a solid recruitment pool mainly for the legion VII Claudia from Viminacium[106]. The quarter of the preserved stone with inscription used as base for a column in the edifice 1 in the fort offers no other clue on this issue[107].

A Greek community of some extent must have existed at Halmyris once the Greek cities on the Black sea shore began trading with the native communities[108]. The transaction between Ἀμαίος

[105] In fact, when approaching such a debatable and sensitive subject the question must be addressed rather to the linguistic than ethnic factor. The intense and remarkable social mobility in the Roman Empire acted basically as a dissolvent of old isolated communities bringing up new social processes at an individual and community scale. The interaction among individuals and smaller or greater communities led to the creation of new mixed bilingual families, new religious orientation and, at larger extent, emigration, immigration, or official implant of significant communities in other territories. Through their number and material and cultural level they produced important restructuring in the mentality and cultural behaviour of the native society.

[106] cf. IMS II nr. 52.

[107] Halmyris I, 2003, 65-78.

[108] The Greek presence at Halmyris is highlighted by the discovery of some fragments of roofing tiles (unpublished) pottery and glass finds, although not in great number. A 6th c. BC Greco-Oriental fragment of a Mid Style II bowl (Suceveanu,

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and Σίμη (see no. 11, 46)[109] are first examples of the existence of local Greek communities. If Ἀμαίος could be eventually considered a merchant, although there is no solid evidence for that, Σίμη seems certainly a Greek woman from the local group that managed the possible and even probable emporium which could have been implanted at the mouth of the Peuce arm of the Danube in the 6th or 5th century BC.

The Greek onomastic tradition seems to have been preserved through existence of a local free Greek speaking community. *Artemidora* (no. 13), who was without a doubt a native woman in the 3rd century AD, give her son, *Heraclius* (no. 31), a typical Greek name. The 3rd century AD Halmyris remains partially a Greek speaking area, in parallel with the Latin. The corrupted PN, ‘Αράκλ(α?) of a certain individual (no. 12) dates conceivable from the 3rd century AD. By the end of the same century or in early 4th, the local onomastics contains the Greek PN *Hermes* (no. 32) the father of a certain *Secundus*. The bishop *Eunomius* (no. 23) was banished at Halmyris by the Emperor Theodosius I. Eunomius was basically a Greek speaking person, for he was born in Dakora (Cappadocia) and active in eastern parts of the Roman Empire. Halmyris must have been a good linguistic environment for him.

Epictetus (no. 21) together with *Astion* and his family (r.10, 14, 35), were Greek speaking persons in the Halmyris Greek speaking milieu.

A Roman Greek name was *Valerius Ponticus* (no. 54). He married a local woman who bears a Thracian Bithynian/Phrygian name (see below). His mixed name suggests a local or regional origin.

The dissemination of the Roman-Thraco Bythinian names on the territory between the Danube and the Black Sea is noticeable. Halmyris PN list displays only two clear cases, *Aelia Bendsi* (no. 1) and *Valeria Nene* (no. 52). The two women were apparently native by birth, although more recent immigration from a Bithynian/Phrygian local milieu to north-east Lower Moesia cannot be totally refuted. The Bithynian presence at the Lower Danube was apparently constant and it is strongly highlighted at Troesmis[110], Noviodunum[111], and Tomis[112].

Three other Roman Thracian names indicate their local origin or at least social mobility: *Aelius Sola* (no. 5); *Claudia Bersille* (no. 17); *Sisso Sissoni* (no. 47).

Sola is mainly a PN of rather Bessian origin. The significantly numerous community of Bessi colonized or freely immigrated in northern modern Dobrudja way back in the first half of the 1st century AD, might be a hint for the native origin of *Aelius Sola*[113].

Roman PN occupies most of the onomastic spectrum. They are, in general names of old Roman and Italic of origin or more recent creations as a result of onomastic evolution. The names having the suffixes *–inus* (no. 7, 8, 19,26, 50,53) and *–anus* (no. 20, 34, 40) suggests a later date in circulation, although the process of adding these suffixes to some traditional names dates back even from the 1st century AD. There is no clear evidence of entrants bearing Roman names in the Halmyris society.

It is difficult to estimate the rate of the social mobility at Halmyris in case of persons who bear exclusively Roman names. The individuals involved or supposed to carry out military activities might not have originated from Halmyris. But some, who settled after service in the canabae, in case of legionaries, or those, discharged from the navy and settled in the *vicus classicorum* as Roman citizens (*Cives Romani*) had their families marrying local women and children who traditionally followed their fathers' profession. The descendants can be considered natives and the more so as their children.

II. Names and Roman Imperial gentilicia

Some important Roman Imperial gentilicia mark a considerable number of individual names in the

Angelescu 1988, 146), as well as a 5th-4th c. BC blue glass Attic amphoriscos (Simion 1995, 265) are among discoveries of Classical Greek artifacts. The Hellenistic coinage is represented by two Callatian (320-300 and 300-260 BC) and eight Olbian pieces possibly part of a coin hoard of ca. 23-24 coins (C. Preda 1980, 35-36 no. 1-8; Poenaru-Bordea, 2003 in: Suceveanu, Zahariade, Topoleanu, Poenaru-Bordea 2003, 127-170). The pottery originates from Chios, Thassos, Rhodos, North Black Sea, Heraclea, and Attica. There is also a significant amount of Hellenistic pottery shards in a Getic context (5th-1st c. BC) found underneath the early Roman levels (Opaiţ 1991, 133-136) which advocates for the existence of a native settlement on the very place of the future Roman fort. Two considerably large plain Getic necropolises (Bujor 1955, 571-580; 1956, 243-252; 1957, 247-254; 1958, 125- 141; 1951, 373-378; 1952, 325-330; 1961, 297-300), and a third tumular Getic necropolis on the territory of the Dunavăţu de Sus village (Simion 1995, 265-302) is indicative for the density of native occupation in the area.

[109] Suceveanu, Angelescu 1988, 146-150, no. 2, fig. 2; Suceveanu, Zahariade, Topoleanu, Poenaru-Bordea 2003, 124-125, no. 20.

[110] ISM V 184, 186, 192, 196.

[111] ISM V, 281.

[112] ISM II 57, 129, 235, 259, 368, 462. See also Barnea 1972, 251-266.

[113] Zah, Suceveanu 1971, 567-578.

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Halmyris society. There are six imperial gentilices with their feminine derivations:

Claudius (no. 18, 19); *Claudia* (no.17); *Flavius* (no. 26-30); *Flavia* (no. 24, 25); *Ulpius* (50); *Aelius* (3-9); *Aelia* (1, 2); *Valerius* (51-54); *Valeria* (49-50).

To begin with, it is striking that there are no *Aurelii* among the Imperial gentilicia recorded thus far at Halmyris. The fact could be a chronological benchmark and a point of significance for the social situation of the Halmyris residents. Except the army, the Roman citizenship was rarely granted en mass or even individually in the civil environment before the reign of Caracalla. Since early 3rd century on, the gentilice *Aurelius* becomes common and of remarkable density; it could be considered the typical PN of the 3rd century.

Halmyris displays gentilicia typical for the 1st and 2nd centuries, but also 3rd century (*Valerius/Valeria*). A community of *Cives Romani* seems to have been strong enough at Halmyris as long as it is mentioned in official documents (votive altars) set by magistri in a *vicus classicorum* pertaining to a naval base affiliated to the *Classis Flavia Moesica*; the fort was also garrisoned by a legionary detachment which conceivably had its own *canabae*, separate from *vicus classicorum*. The epigraphic evidence frames the *Cives Romani* from the *vicus* between early 2nd century and 209 at the latest. Within this time span are datable most of the PNs with their gentilices *Claudius, Flavius, Ulpius, Aelius* and *Valerius*. The Roman citizenship was legally granted to soldiers of the local navy squadron (*classici*) upon their discharge. Unluckily, in lack of specific reference, we are ill-informed on the PNs of all these marines who became citizens. From *vicus classicorum* we know only the gentilicia of some *magistri*: *Flavius* (no. 29), Titus (no. 49) *Marcius* (no. 36), *Publius Pompeius* (no.42), *Sossius* (48). *Titus* is a nomen gentile formed of a praenomen; *Publius Pompeius* is an association of two gentilicia; *Marcius* is both plebeian and patrician gentilice in origin. *Sossius* is an ancient gentilice among those of Latin (non-Italic) origin.

Perceptibly, the gentilicia could be grouped in a chronological order, although this might prove elusive for they continued to be held by individuals in later periods. The earliest Imperial *gens* circulated among the Halmyris inhabitants is *Claudia* (no. 17-19). The rather late date of the inscription which records the *Claudii* shows the survival of the gentilice, either acquired or inherited, in the area.

The gentilice *Flavius* (no. 26-28) survived by inheritance in the 2nd century Halmyris. Both *Claudii* and *Flavii* are gentilices coming from a period when the Lower Danube frontier began to be systematically organized and controlled.

Ulpii (no. 48) and *Aelii* (no. 3-9) are largely circulated, particularly since 2nd century. Although with only one record, *Ulpius* would be representative for an early 2nd century presence of a solid occupation, both civilian and military, in a period when the first stone fort and civil settlement took final shape due to the building works of a common legionary vexillation from I Italica and XI Claudia[114]. The local population of Thracian tinge continued to be integrated as the case of *Claudia Bersille* (no. 17) and *Aelius Sola* (no. 5) proves.

The group of *Valerii* (51-56) suggests in most cases a later period. Except *Valerius Longinus* in first half of the 2nd century, the most representative cases are the *Valerii* family (no. 52, 54, 55) datable in the second half of the 2nd century or in the first half of the 3rd century, and *Valerius Valerinus* from late 3rd or early 4th century (no. 56) as well.

Tria nomina, which ascertain Roman citizenship, is detectable in case of *T. Flavius Secundus* (no. 28), *M. Ulpius Marcellinus* (no. 50), and *C. Valerius Longinus* (no. 53). They fulfilled their career mostly in the first half or mid 2nd century when *tria nomina* was still applicable to the individuals with citizenship.

Early 3rd century, although the practice was developing roughly since late 2nd century, witnessed large scale multiplication of *dua nomina*, with the general abandonment of the praenomen whose role is commonly taken over by the gentilice while the former cognomen became nomen. The individuals bearing only two names represent 48.33% of the entire lot under scrutiny.

For one thing, some women (no. 1, 17, 52) bear non-Roman names which they preserved even after marriage and attached to gentilicia which became *nomen*: *Aelia Bendsi, Claudia Bersille, Valeria Nene*. It is untenable the idea that they could have been originally *slaves* or *libertae*. They acquired the gentilicia either as inheritance from their fathers, which is most probable, or simply upon marriage[115]. The Thraco-Bithynian / Phrygian names acted as cognomina in a period when praenomen is usually dropped off and the gentilice was used as nomen. Only the case of *Flavia Primitiva* (no. 24), considering her cognomen, would show some signs of an initial humble condition (*liberta*),

[114] Zahariade 1986, 173-176.

[115] Kajanto 1977, 155-156. The second *gentilicium*, as in case of no. 2(*Aelia Marcia*), no. 25 (*Flavia Titia*), no. 37 (*Memmia Marcia*) was inherited apparently from their mother.

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although a rush conclusion on that matter is highly risky.

No. 49 (*Valeria*) shows a typical case of practice of omission of cognomen as, at the late period when *Valeria* is mentioned, the filiation had long time disappeared in most of the cases.

One case is interesting. No. 25 (*Flavia Titia*) bears basically a double gentilicium in a form which uses the gentilicium as name and the other as cognomen. As noticed, the incidence in case of women is many times greater in comparison with men. In J. Kajanto's classification this case is sent to the category of double gentilicia without cognomen, which in our case, means a gentilicium turned to be used as a cognomen[116].

III. Families

The epigraphic evidence displays complex and simple type of families as to the number of members.

Complex families

1. The Nepotiani

The most numerous family group recorded at Halmyris is *Nepotianus*' (no. 13, 31, 33, 40, 57, 59, 60). The gravestone found at Dunavatu de Jos, although brought from Halmyris[117], records eight individuals (one not named) in a family resulted from the marriage of *Nepotianus* and *Artemidora*. The origin of *Nepotianus*, a *principalis* in the local garrison is more difficult to assess, although if one considers the widespread principle of local recruitment in the army at the later date when the epitaph was set we can consider him also locally born.

At least four infants are mentioned between two and five years as having been dead in unknown circumstances, violently or as a result of a spread out epidemic. Two other apparently older, a son specified only as *filius* and a daughter, *Viventia*, are recorded as setting the tombstone together with their mother, *Artemidora*. The family head, *Nepotianus*, died 36 likely together and in the same time with all infants. Artemidora must have been a local woman. This mixed Greek-Latin family is reflected in the names of the born children of whom one bore a Greek name, *Heraclius*.

2. The Ulpii Marcelli (no. 17, 50)

M. Ulpius Marcellinus' family must have had more than three members. He married a local woman, *Claudia Bersille* (no. 17) but the indication *natis* at the end of the text suggests a certain number of children.

3. The Memmii (no. 26, 37, 38)

The Memmii family at Halmyris was composed of three recorded members: *Memmia Marcia*, the daughter, *Memmius Marcus*, the father of Marcia, and *Flavius Martinus*, the husband of *Marcia*.

The *Memmii* family at Halmyris (father and daughter) could have been one of the distant branches of the old and numerous Italic *gens* of *Memmii*. The family had settled at Halmyris presumably by mid 2nd century with a high social status and good material situation, reflected in outstanding *stele* for his daughter[118]. The chance that the father could have been a veteran of the legion V Macedonica billeted at Troesmis cannot be so easily discarded, as two other Memmii, *Valens* and *Capito* are recorded on the Troesmis legionary latterculum of 134[119]. At Halmyris, the daughter married *Flavius Martinus*, (no. 26), but apparently the new family had no children.

4. The Valerii (no. 50, 52, 53)

A three members family of late 2nd or first half of the 3rd century was that of *Valerii*: *Valerius Ponticus* (no. 54) the husband of *Valeria Nene* (no. 52); *Valerius Valens* (no. 55), the son of the two above mentioned. *Valens* was *miles* in the legion I Italica which, since 167, had dispatched a significant draft to Troesmis a legionary fortress abandoned by the V Macedonica which moved up to Potaissa in Dacia. Had *Valerius Ponticus*, the father, any connection with the army, *Valens* would have inherited the military traditions in the family and served in the local garrison after 167. If one considers the remarkable incidence of the Bithynian names at Troesmis one might speculate on the fact that *Nene* must have belonged to the stock of the Bithynian colonists settled in the area. Upon discharge, *Ponticus* chose to settle in the Halmyris canabae. Regardless whether *Valens* was born at Troesmis or at Halmyris, he traditionally followed the father's *métier d'armes* joining the flags in the legion I Italica, possibly even in the local Halmyris garrison.

5. The Aelii Valentes (no. 4, 6, 7)

The text on the stone is too fragmentary to allow a coherent and complete assessment on this family. It is clear that *Aelius Valens* set the gravestone for another *Aelius Valens*. *Aelius Sabinus* was ap-

[116] Kajanto 1977, 155-157.

[117] Doruţiu-Boilă 1964, 132 nr. 7; IGLR no. 168 with the bibliography.

[118] GLIH 98 no. 25.

[119] ISM V nr. 137 II 5 (*Memius Valens*); 25 (*Memmius Capito*).

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parently the son of the deceased if not the letter E preserved on the stone and restorable E[T…] implies another family member (son?). *Aelius Valens* who set the dedication must have been an old aged veteran either the father or comrade-in-arms; he lived and buried the 45 years old *Aelius Valens*.

Simple families

Commonly, two members family can be considered a simple social cell. There are five instances of simple families at Halmyris.

6. Aelia Bendsi and T.Flavius Secundus (no. 1, 27).

The marriage between a local woman and a Roman citizen finds other examples at Halmyris (no. 50- 52; 17- 48).

7. Aelius Titianus and Flavia Titia (no. 9, 25).

The instance offers a mother and son type of relationship, where the mother has a different gentilice from that of the son.

8. Flavius Valerius and Flavia Primitiva (no. 23, 24).

Both spouses have the same gentilice, a strong hint that the marriage occurred between two members of around same age who acquired or rather inherited the gentilice in the same period.

9. Claudius Clemens and Claudius Martinus (no.18, 19).

The inscription states specifically the father and son type of relation. Both are *Claudii*. The son seems to have inherited the gentilice from the father.

10. Hermes and Secundus (no. 31, 42).

The instance in which father and son are recorded is late 3rd-early 4th century.

IV. Fields of activity

Military

Clear evidence of military career is yielded in case of: *Aelius Valens*, *veteranus* (no. 6); *Aelius Saturninus*, *miles*(?)(no. 8); *Latronianus*, *dux provinciae Scythiae* (no. 34); *Nepotianus*, *principalis* (no. 40); *C. Valerius Longinus*, *miles, beneficiarius legati legionis* (V Macedonica) (no. 53); *Valerius Valens*, *miles legionis I Italicae* (no. 55); *Valerius Valerinus Constans*, λεγιώνης πρείμας ’Ιωβίας (no. 56); *Vigilantius*, *quaestionarius* (no. 58).

Except no. 34, 53, and 56, of whom we have specific reference on the units and their position held in the military hierarchy, in case of no. 6, 8, 40, and 58, although military and social position are unambiguously rendered: *veteranus* (no. 6), *principalis* (no. 40), *quaestionarius* (no.58), their affiliation to a certain unit in garrison at Halmyris remains conjecturally.

Involvement in the local military is suggested in case of: *Aelius Sola* (no. 5); *M. Ulpius Marcellinus* (no. 50) *Claudius Clemens* (no.18); *Claudius Martinus* (no. 19); *T. Flavius Secundus* (no. 28); *Memmius Marcus* (no. 38), and *Valerius Ponticus* (no. 52).

Local Administration and economy

The Halmyris civil administration is represented by mayors (*magistri*) in *vicus classicorum* from early 2nd century to 209: *Flavius Valerius* (no. 29); *Marcius* […] (no. 36); *Marcus Paparius* (no.39); *Publius Pompeius* (no.42); *Sossius Sossi* (no. 48); *Titus Collumela* (no. 49).

Indication of early (late 3rd-early 2nd c. BC) local trade is offered by the association of the two Greek names (no. 11, 46), Ἀμαίος, the vendor and Σίμη, the buyer of a pot called tribaion. *Valeria* (no. 51), the daughter of *Diocletianus*, was apparently involved in animal bone processing in late 3rd-early 4th century which could imply the functioning of a specialized workshop at Halmyris.

V. Religion

The votive altars set by the magistri of vicus classicorum were devoted, as customarily, to *Iuppiter Optimus Maximus*, the supreme Roman deity. *Dies Manes* are invoked in most cases when the individual was buried and an aedicula- gravestone was set by the relatives. *Memoria* is invoked in two cases in association with *Dies Manes* (no. 1, 28, 40).

The intense religious (Christian) activity prompted by the execution of the two Christian martyrs involved the following individuals: *Alexander*, *Astion*’s father (no. 10); *Astion*, monachus (no. 14); *Bonosus*, presbyter (no.15); *Epictetus*, presbyter (no. 21); *Evangelicus*, pontifex (no.22); *Marcellina*, *Astion*’s mother (no. 35); *Vigilantius* (no. 58).

No. 23, *Eunomius* (bishop) was banished to Halmyris for some years. He seems to have escaped the disaster from the winter of 384/385 when Halmyris was destroyed by an invasion, as long as he died later at his estate in Dakora (Cappadocia).

VI. Age and decease

The significant number of individuals (60) who displayed their names a number of 11 has indi-

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cated on the epitaphs set by the relatives the age reached upon their death.

A number of individuals died prematurely of natural causes or violently. Illness could be invoked in case of the five infants of *Nepotianus* (no. 31, 33, 57, 59) and maybe the father himself could have fallen dead of the same disease. The layout of the *aedicula* set by his wife, *Artemidora* have two registers, one in which two other children (an unnamed son, her daughter, *Viventia*) and herself are mentioned while the name of the deceased (*Nepotianus*, her husband, and four infants) are completely separated into another field below[120].

It must have been an event which took five lives at once, and a severe illness must be envisaged. *Nepotianus* died aged 37 together with the infants (*Victor* at 2, *Iuliana* at 3, *Heraclius* at 3, and *Vitalis* at 5), shortly before, after or in the same time while still in service as principalis.

The same natural cause, a severe illness, can be more likely invoked in case of *Memmia Marcia* who deceased aged 19; the gravity of the disease is foreseen in the presence of a *d*(*octor*), *Flavius Secundus*, who have watched over her to the very end and was mentioned in the text of the inscription. *Aelius Valens* died aged 45 of unknown causes. *Claudius Martinus*, if he was involved in the military died at an early date (20) and we can only speculate either of illness or violently. Two individuals, *Flavius Valerius* and *Flavia Titia* died at 70 and 60, respectively, certainly of oldness or other complications of that age. *Aelius Saturninus* died after five years of service (militavit annis V). As in case of *Claudius Martinus, Saturninus* death could have occurred while in action. Someone from the family of *C. Valerius Longinus* died aged 32, as indicated on the epitaph set most likely by the veteran.

There is specific reference of violent death through decapitation of *Epitetus* and *Astion* in 290.

[120] GLIH no. 28 fig. 71 and commentary at page 94-95.

ABBREVIATIONS and BIBLIOGRAPHY

AE	*Année Épigraphique*, Paris.
N. Cath. Enc^2	*New Catholic Encyclopedia*, Washington, vol. 5.
CIL	*Corpus Inscriptionum Latinarum*, Berlin.
CTh.	*Codex Theodosianus. The Theodosian Code and Novels and the Sirmodian Constitutions*, a translation with commentary, Glossary, and bibliography by Clyde Pharr, Princeton University Press, 1952.
CPL	R. Cavenaille, *Corpus Papyrorum Latinarum*, Wiesbaden, 1958.
IDR	*Inscripţiile antice din Dacia şi Scythia Minor. Inscripţiile Daciei Romane. Vol. I-IV*, Bucureşti, 1977-2001.
IGB	G. Mihailov, *Inscriptiones Graecae in Bulgaria repertae*, vol. I-IV, Serdicae, 1956-1966.
IGLR	Em. Popescu, *Inscripţiile greceşti şi latine din secolele IV-XIII descoperite pe teritoriul României*, Bucureşti, 1976.
IGRR	*Inscriptiones Graecae ad Res Romanas Pertinentes* I, III-IV, Paris, 1906-1927.
ILB	B. Gerov, *Inscriptiones Latinae in Bulgaria repertae*, Serdicae, 1989.
ILJug.	*Inscriptiones latinae quae in Jugoslavia inter annos MCMLX et MCMLXX repertae et editae sunt*, Ljubliana, 1978.
ILS	*Inscriptiones Latinae Selectae*, vol. I-III, Berlin, 1892-1916.
IMS	*Inscriptions de la Mésie Supérieure* vol. I-IV, VI, Beograd, 1982-1995.

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IOSPE	*Inscriptiones antiquae orae septentrionalis Ponti Euxini Graecae et Latinae*, vol. I-II, IV, Sankt Petersburg, 1885-1901.
ISM	*Inscripţiile din Scythia Minor greceşti şi latinae*, vol. I-III, V, Bucureşti, Paris, 1983-1999.
LPGN	*Lexicon of Greek Personal Names*, vol. I-V, Oxford, 1987-2010.
MAMA	*Monumenta Asiae Minoris Antiqua*, Manchester, 1928 sqq.
PIR^2	E. Groag, A. Stein, L. Petersen, K. Wachtel *et alii*, *Prosopographia Imperii Romani (Saec. I. II. III),* I-VII Berlin, 1933 sqq.
OPEL	*Onomasticon Provinciarum Europae Latinarum*, Ediderunt, B. Lőrincz et F. Redő, vol. I-IV Budapest & Wien, 1999-2005.
PLRE I	*Prosopography of the Later Roman Empire*, A. H. M. Jones, J. Martindale, J. Morris eds., vol. I AD, Cambridge, 1971, 260-395.
PLRE II	*Prosopography of the Later Roman Empire*, J. Martindale ed., vol. II AD, Cambridge, 1980, 395-527.
RE	*Real Encyclopädie der Classischen Altertumswissenschaft* (Pauly Wissowa Kroll), Stuttgart.
RMD,	*Roman Military Diplomas*, vol. I-V, London, 1978-2005.
SEG	*Supplementum Epigraphicum Graecum*, Paris.

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Bujor 1956	Ex. Bujor, *Contribuţie la cunoaşterea populaţiei geto-dace din nord-estul Dobrogei*, SCIV 7, 3-4, 1956, 243-252.
Bujor 1957	Ex. Bujor, *Săpăturile de salvare de la Murighiol (reg. Constanţa r. Tulcea)*, Materiale 3, 1957, 247-254.
Bujor 1958	Ex. Bujor, *O geto-dakiiskoi culture v Murighiole*, Dacia N. S. 2, 1958, 125-141.
Bujor 1959	Ex. Bujor, *Şantierul arheologic Murighiol (r. Tulcea, reg. Constanţa)*, Materiale 5, 1959, 373-378.
Bujor 1959^2	Ex. Bujor, *Şantierul arheologic Murighiol (r. Tulcea, reg. Constanţa)*, Materiale 6, 1959, 325-330.

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PERCENTAGE REPORTS IN THE ARCHAEOLOGICAL RESEARCH

ION PÂSLARU, VITALY POZHIDAEV

Keywords: margin of error, percentage reports, probable error, sampling, confidence interval, percentage, statistical methods.

Abstract: In the study of archaeological, paleozoological, anthropological, and other data, scientists often use percents and percentage reports. At the same time they do not take into account that the studied samples represent only a fraction of the total samples of the objects and their interest and calculated percentages contain probable errors, which ultimately leads them to mistakes and incorrect conclusions. In order to avoid similar situations in the future, the authors propose to use the method of percentages reports at which the calculated probable errors and confidence intervals.

Cuvinte cheie: marjă de eroare, rapoarte procentuale, eroare probabilă, eşantion, intervale de încredere, procente, metode statistice.

Rezumat: În studiile de arheologie, paleozoologie, antropologie, şi altele, cercetătorii folosesc adesea procente şi rapoarte procentuale. În acelaşi timp, ei nu iau în considerare faptul că eşantioanele studiate reprezintă doar o fracţiune din unităţile generale ale obiectelor şi procentele calculate de ei conţin erori probabile, care în cele din urmă duc spre tragerea unor opinii nejustificate şi concluzii incorecte. Pentru a evita în viitor situaţii similare, autorii propun să fie utilizată metoda rapoartelor procentuale prin care se calculează erorile probabile şi intervalele de încredere.

Beginning with the first stages in the development of archaeology and often in modern archaeological publications there are found direct or indirect references about the quantity of the artefacts, events or phenomena like: much-less, often-seldom, typical-exceptional and others. This level of making a general inference about the data and the volume of artefacts quantity, the archaeologist demands an initial collectivity, its systematization in the form of statistical reports.

But, it is out of our intention now to draw attention of the researchers upon the methods of percentage using. In archaeology there are not rare cases of inadequate utilisation of statistics. This situation may be due to the fact that the archaeologist who use the mathematical statistics are not trained enough in this field. Still the attempt of finding an unique general scheme which can be fit to all scientists and cases, cannot be designed.

In our everyday life, in business, but also in the scientific research the percentages play an important role, as they offer a possibility of comparing the parts of a whole between them and they simplify the calculation. The percentage is the hundred part of a unit, which is designated by the sign "%" and it is meant to show a part of a whole and its report with it. The term "percentage" comes from the Latin "*pro centum*", namely the hundred part, that was used in the Ancient Rome. These parts of a hundred from a specific number are comfortable to use in the practical activity and this is why people have started to utilize them for a very long time.

The percentages are widely used in mathematics and statistics. Such calculations are employed not only in the exact sciences, but also in archaeology, history, as well as in other interdisciplinary domains. Very popular is the operation of transforming the quantity data into percentages. In this case the numeric data are being transformed into percentages based upon the empirical percentages, yet without taking into account the possible existence of some errors, that depends upon the volume of studied units or upon the samples of the materials investigated. Most probably, do not exist researcher which had never used percentages or percentage reports in their studies.

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In archaeology, the same like in other scientific fields, the researchers had used directly or indirectly the percentages, percentage comparisons and percentage reports. This aspect can be noticed in almost any article that discusses a large quantity of material, no matter if archaeological, arheozoological, anthropological or another kind. It could refer to pottery, burial orientation, flint implements, decorations and others. The mathematical method of percentage reports which is usually not perceived by archaeologists as a method, it is still used widely by them. Usually it helps when discussing trends which law character or when converting the quantity/quality features of: *"much/less, "more/lesser"* for drawing important conclusions of the type: *"on the first rank …. "*, *"main orientation"* or other similar ones.

A large interest in using mathematical methods and especially the mathematics statistics for processing large archaeological samples could be notices in the European archaeology between 1970-1980. In Romania, Poland, Russia and Ukraine had been organized conferences, symposia and seminars dedicated to the application of the physical and mathematical methods in the field of archaeology. A number of monographs and volumes of scientific volumes have been published on this topic. The interest became even more acute when the PC extended on an international scale.

But, we have to notice here that the problems that existed in archaeology in the times before computing the data could not be solved by the simple presence of such equipment. It is a fact that each scientist uses in his work certain indices, dimensions and parameters chosen by him and not always his choice could be satisfied completely or at all by the typical computer programs used for the statistic processing of the materials that he has to analyse. This is maybe the reason why some researchers had adopted their own way of creating such programs. Thus, in Romania and elsewhere some informatics products had been created, among which we could mention here "Zeus"[1], "Compas"[2], informatics systems, expert-systems, etc.[3]

Yet, it seems that until the archaeological materials could be widely computed is a long way and this is why the scientist have focused themselves upon simple statistical methods, the main one of them being the percentage reports. What we really have to point out here is that the often use of this method is done without keeping with the specific rules, fact which results in incorrect conclusions, sometimes even to absurd ones.

As an example, we will take a study of the Russian archaeologist Igor Kamenetskyi[4]. A pottery sample that he took for comparison, considered by him as reaching 100% had equaled a single (1) unit. The archaeologist Oleg Prihodniuk from the Ukraine in a study regarding the osteological materials had taken the sample comprising two (2) units, which he estimated to be of 100%[5].

Still, we have to observe that in such cases the conclusions of the researchers based upon the percentages analysis when indicating the sample amount, gives us the possibility of judging the credibility of the opinions based upon such facts. It is even worse when the archaeologists draw their conclusion considering the percentages reports of the studies materials without indicating the real quantity (n) of the units they used. For instance, the conclusion regarding the main rank of the bovids in the Euro-Asian steppe of the Andronovo[6] or Srubnaya[7] cultures are being based on samples, whose exact figure is not known by the readers of the respective papers. We should keep in mind that the small quantity samples, comprising just several units or tens have a large margin of error.

The research methods based upon the statistical data of a large number of objects/subjects are called statistical methods. They are used in different science domains and in fact have the purpose of numbering the objects/subjects that entered in some or other groups of study regarding the qualitative indices distribution, of using the partial sampling method, of employing the probabilities theory in the evaluation of the suffice observation in drawing one or other conclusions and so on.

This is a format facet of the statistical methods of research which is independent from the nature of the studies objects/subjects and is part of the mathematical statistics.

Unfortunately, there is a trend of considering the statistics is a science which could prove anything. Yet, it is also true that sometime the methods of the mathematical statistics are used with the purpose of misleading people. As the English man of state and writer Benjamin Disraeli has said it, there

[1] Lazarovici 1996.

[2] Teodor 1996.

[3] *New tools ....* 1990; *Archaeometry in Romania* 1990; Pislary 1989a. 60-61; Pislary *et alii* 1989b, 123-126; Voorrips 1990. 115-121.

[4] Kamenetskyi 1965.

[5] Prihodniuk 1993.

[6] Kuz'mina 1986.

[7] Buniatean, Otroščenko 1993.

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are three kinds of lying: the customary lie, the unlimited lie and statistics.

Still, the main task and purpose of the statistic are meant to facilitate a better understanding of the issue that people have in a certain time.

Many examples of correct and incorrect use of the statistical methods could be given. It all depends upon the person that uses them. We should not neglect also the fact that statistics has two main functions: a descriptive and an explicative one.

The value of the descriptive function gives the short and concentrated characteristic of the studied phenomenon. As usual, in many cases the situation is not clear and determined even if the researchers operated with customary characteristics, like average and others. Due to the multi-semantic interpretations, such values (indices) could be used for proving contradictory opinions. The evaluation of the credibility level for such opinions, in its turn, poses a long series of specific problems.

In examples that we would use below we are firstly interested in the logic of thinking, a fact which is even more important than examples themselves.

Very often, the percentages are used for solving the aspects of classification and typology of the archaeological monuments. In the example given here, the authors, based upon the automatic classification and typology of the archaeological monuments from Altai, had emphasized two main groups of the population in that region and tried to describe the differences between them[8]. According to the authors, the best used method in this purpose became the calculation of the percentage reports for each type of ornament in each archaeological site. As a result of this information each site it is rendered in a line of the table, while the columns contain the data about the ornament types for all the sites. The corresponding column is dedicated to the fire that indicates the percentage part of the respective ornament in a specific site. After the analysis of the materials in the settlements from the 6th-2nd c. BC., the author had pointed out the existence of 12 ornament types, which are characteristic in a certain degree for all or most of the site, each of them with its own weight. For all 39 studied sites had been established the percentages for each ornament type. We should point out here the fact that in the table created by the authors are not given the data about the quantity of the materials which was the base of the percentage calculation. After the table being completed it was automatically processed by the use of a special module of the SYSTAT package.

We render below a table, created by the authors of the study and to which we added the figures representing the number of ceramic fragments for each site (the last column – "N") and we also established a margin of error (ΔP) just for a single parameter (3) from the percentages calculated by the authors. It is obvious that, without being considered the possible mistakes for the established percentages, the authors have used these empirical percentages for a further statistical processing.

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From the analysis of the table we could observe that the minimal quantity of the ceramic fragments from the sites is rather different, and the authors

©	Settlements ……	1	2	3	ΔP(±)	4	5	6	7	8	9	10	11	12	N
1.	Novo-Altaiskoe	5.1	11.8	62.6	8,72	1.7	0.0	0.0	0.0	2.5	5.9	0.0	0.0	0.0	118
2.	pf 6	2.8	28.7	58.3	8,01	3.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	145
3.	pf 10	4.0	26.0	43.6	8,72	0.8	0.0	2.4	0.0	1.6	5.6	0.0	0.8	0.8	124
4.	pf 17	2.1	25.0	43.2	8,21	0.0	0.0	0.0	0.0	16.4	8.4	0.0	0.0	0.0	140
5.	be 12	3.6	34.7	50.7	5,58	0.0	0.0	0.0	0.0	5.1	0.0	1.2	0.0	0.0	308
6.	be 1	1.3	14.4	75.3	2,64	0.3	0.0	0.0	0.0	3.6	0.0	0.2	0.0	0.1	1020
7.	mgk 1	3.8	12.0	35.2	6,36	8.5	1.8	3.1	0.0	3.2	3.1	0.0	4.0	0.0	216
8.	pb 3	13.2	11.9	4.0	2,82	20.3	1.0	2.6	0.0	0.5	0.0	0.0	19.6	0.0	192
9.	Kost	4.2	11.2	51.1	5,58	0.0	0.0	0.6	0.0	8.4	4.4	4.1	0.6	4.8	308
10.	Dmgr	1.0	4.2	52.1	8,33	0.0	0.0	0.0	0.0	14.5	0.0	13.6	0.0	0.7	138

[8] Abdulganeev, Vladimirov 1997.

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11.	Kipr	11.3	9.1	22.7	7,64	27.3	0.0	9.1	0.0	0.0	0.0	0.0	11.4	2.3	115
12.	ostr 3	13.5	9.7	17.6	4,25	15.5	4.5	6.5	0.0	0.3	1.4	0.0	8.3	0.0	310
13.	krest 3	3.1	1.0	8.5	5,30	64.4	2.1	3.1	0.0	0.0	0.0	0.0	5.2	0.0	106
14.	pt 1	34.5	13.5	15.5	5,80	0.0	0.0	0.0	0.6	0.6	0.0	0.0	4.6	18.6	149
15.	pt 3	28.9	11.7	1.8	2,18	0.0	22.6	0.0	3.0	0.0	0.0	0.0	13.6	6.0	154
16.	pt 8	56.4	7.0	11.9	5,37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	7.7	137
17.	enis 1	16.9	13.6	25.4	7,85	0.0	0.0	0.0	3.0	8.7	0.0	13.6	0.0	9.2	118
18.	sol 1	25.2	2.4	27.2	4,94	0.0	0.0	0.0	0.0	33.1	0.0	1.7	0.0	0.9	310
19.	maima 1	16.9	29.0	26.9	7,62	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	2.4	130
20.	novoz 3	7.0	7.0	50.5	6,94	0.0	0.0	0.0	0.0	28.0	0.0	0.0	0.0	1.5	199
21.	Mal	12.6	17.4	27.1	8,59	3.8	0.0	0.0	0.9	1.8	0.0	6.7	0.0	15.5	103
22.	maima 3	28.7	13.1	0.0	0.0	0.0	0.0	3.2	4.4	0.0	8.4	0.0	0.0	5.9	153
23.	Zar	20.7	17.4	25.8	9,22	0.0	0.0	0.0	0.0	9.7	0.0	0.0	15.2	10.5	86
24.	ber 2	19.3	9.2	17.0	7,85	1.1	0.0	0.0	29.5	0.0	0.0	0.0	0.0	0.0	88
25.	pt 7	26.0	16.0	2.0	3,88	0.0	2.0	0.0	14.0	0.0	0.0	0.0	6.0	8.0	50
26.	Stan	20.0	5.3	34.6	10,77	8.0	0.0	0.0	0.0	9.3	0.0	1.3	0.0	13.3	75
27.	uisha 3	9.1	18.2	29.5	11,05	0.0	0.0	0.0	0.0	0.0	0.0	20.4	0.0	15.9	65
28.	Step	24.2	17.5	22.5	9,15	0.0	0.0	0.0	0.0	1.2	0.0	6.2	0.0	10.0	80
29.	maima 2	24.0	6.5	38.2	11,82	0.0	0.0	0.0	0.0	12.6	0.0	3.3	0.0	7.0	65
30.	maima 12	25.0	18.1	39.2	11,90	0.0	0.0	0.0	0.0	5.7	0.0	5.7	0.0	1.9	65
31.	bor 3	9.8	19.6	34.4	11,92	0.0	0.0	0.0	0.0	4.9	0.0	11.5	0.0	1.7	61
32.	pf 4	3.4	2.8	68.9	10,05	2.4	0.0	0.0	0.0	4.9	7.4	0.0	0.0	1.2	81
33.	pf 15	1.7	20.0	67.6	10,87	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	70
34.	kz 1	10.0	38.5	27.1	10,41	1.5	0.0	0.0	0.0	1.5	0.0	0.0	17.7	0.0	70
35.	vozn 1	10.5	5.5	10.5	6,46	10.5	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	86
36.	olg 1	4.2	12.5	62.4	11,18	0.0	0.0	0.0	0.0	11.1	2.8	0.0	0.0	1.4	72
37.	vas 2	3.9	11.7	68.4	10,45	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	76
38.	lespas 1	2.5	12.4	53.7	8,88	0.0	0.0	0.0	0.0	6.6	0.8	0.0	0.0	1.7	121
39.	turgor 1	1.9	36.9	17.5	7,33	1.9	0.0	5.8	0.0	11.6	0.0	1.0	6.8	1.0	103
															6007

Fig. 1. The initial data in % (*apud* Abdulganeev and Vladimirov, 1997).

compared them just like being absolute values without taking into account that they could have a possible mistake. The margin of error, as we could find, is rather high. Therefore in sample no. 6 that comprised 1020 units and the percentage of “75.3%” the margin of error is of ±2.646895%. while for the smallest sample no. 25 with the percentage of “2.0%” the margin of error reaches ±3.8806%. Generally, the empirical percentages calculated by the authors for the parameter no. 3 have a margin of error which varies between ±2.18% and ±11.92%. This fact cast a great doubt upon the results rendered by those researchers that used the data in such a manner for the statistical processing.

Description of the method

In another article we had advanced the proposal of using the percentage reports method and we demonstrated the advantage of the employment of the possible error calculation for any sample. as well as the methodology for establishing the margin of error[9].

We will try to show here the procedure and formula for the calculation of the margin of error (±ΔP) or the mistake of the empirical percentage (P), which can easily be established even by the use of a simple, regular computer, which in our

[9] Pislary. Pozhidaev 1982.

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times is a small thing and which all student have. Moreover, the computers are also present in the mobile telephones.

The formula for establishing the margin of error - $\pm\Delta P$ - is, where

$$\Delta P = t\sqrt{\frac{P(1-P)}{N}}$$

At the level of significance $\alpha = 0,05$ that is with 95% certainty for the width of the confidence interval is valid calculation formula

$$\Delta P = 1.96\sqrt{\frac{P(1-P)}{N}}$$

In general, the value *t* is equal quantile of the Student distribution. With values $N \to \infty$ according to the Central Limit Theorem (CLT), the quantity $t \to 1.96$. Coefficient $t = 1.96$ corresponds to the so-called large sample $N > 30$ with the Student distribution in the limit tends to the normal (Gaussian distribution).

P – notation of the empirical percentage

ΔP – delta P or the margin of error for the empirical percentage (P)

N – quantity of the materials based upon which the percentage had been established

1 – 100%

1.96 – the coefficient that conforms the authenticity level of 95%, which means that the probability that a certain event might occur equals 95% (in the statistics this percentage is a very high level), the same as it is also possible that in 5% of the cases the same event could not occur.

But, what happens if we consider the level of probability at 50%? This means that the event could occur or not in the same percentage.

Now we must calculate the possible error (Δ – delta) of the empirical percentage (P) or the margin of error (ΔP – delta P) based upon the up mentioned formula, by using the help of a customary calculating machine or the one on the computer.

Algorithm for calculating the margin of error and construction of veridicity intervals. We will take an example in order to explain the construction of the algorithm for establishing the margin of error.

Exemple no. 1

Adrian Bălăşescu, in one of his articles describes and analyses the fauna materials coming from a tumulus near Ciulniţa, Ialomiţa County[10]. Among the animal bones belonging to the Coslogeni culture of the Late Bronze Age, the author said that out of 312 bones (NR=312) the large majority represents the following species, belonging to 26 individuals (NMI=26):

Bovids – 78 bones – 6 individuals

Caprine – 39 bones – 10 individuals

Suides – 32 bones – 10 individuals

Equides – 21 bones – 1 individual.

The numeric data are also accompanied by percentages 45, 24, 20 and 12% corresponding to the bones (NR) and 23, 38, 23 and 4% for the number of individuals (NMI).

No. of the operation	Operation	Result on the screen
1	We press the key with figure "**1**"	1
2	We press sign "-"	1
3	We establish the empirical percentage **0,25**	0,25
4	We press the key with the sign "-"	0,75
5	We press the key with the sing "**x**"	0,75
6	We establish the empirical percentage **0,25**	0,25
7	We press the key with the sign "="	0,1875
8	We press the key with the sign "**:**"	0,1875
9	We create number ***N***, namely **312**	312
10	We press the key with the sign "="	6,009615384
11	We press the key with the sign "√"	0,02451451689
12	We press the key with the sign "x"	0,02451451689
13	We create number **1,96** (probability of 95%)	1,96
14	We press the key with the sign "x"	0,0480484531
15	We create the figure 100 (transformation in %)	100
16	We press the key "="	4,80484531088

Fig. 2. Algorithm for establishing the margin of error.

[10] Bălăşescu 2000, 169-176.

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The final conclusion of the researcher sounds like that: "*the bovids rank the first (45%), the caprines rank the second (24%), while the suids rank the third and the Equides rank the fourth*"[11].

On a first sight, this opinion seems to be plausible. Yet, after analysing the margin of error and constructing veridicity interval for the established percentages, we have reached the conclusion that the results of A. Bălăşescu did not enable him to get such a result, because the sample didn't comprise a sufficient number of units and this is why the margin of error is a considerable one. On the other side, even if the author had determined the bones by the minimal number of individuals, he had decided to use just the number of bones (NR) for the final conclusion. Further one, we will give our analysis concerning the data advanced by A. Bălăşescu.

If you follow our advice, by using a regular calculating machine, we will start in this way (Fig. 2).

Therefore, it was taken the sample of 312 units and it was established the margin of error for the empirical percentage of 25% (n=78). At the end of the calculation it resulted the figure of **4.804845** ... which means that the margin of error (ΔP) delta P for 25% equals ±4.804%, which, for group no. 1 (bovids), comprising 78 units, the likely percentage is 25.0%±4.80% or 20.19% **–** 29.8%.

The same procedure we apply to the other figures of the groups. Afterwards the obtained results are the following ones: 1 – 25.0 ± 4.8%; 2 – 12.5 ± 3.66%; 3 – 10.25 ±3.36%; 4 – 6.73 ±2.78%.

In these times, when most of the archaeologists have computers with the "Excel" program, we advance a data processing by establishing the margin of error according to the model given below (Fig. 3):

We should start with the first upper line on each column.

Column - A – for the total number of the studied sample - *N*

- B – for the number of units in each group - *n*

- C – the empirical percentage (n/N*100) or P: in cell ***C*** *we write a formula:* ***=(B1/A1)*100***

- D – transformation of the empirical percetange (P) into a number in cell ***D*** *we write a formula:* ***=C1/100****")*

- E – the probability coeficient of 95%: in cell ***E*** *we write figures: "****1.96****")*

-F – part of the formula for calculating the margin of error (ΔP): in cell ***F*** *we write a formula:* ***=sqrt((D1)*(1-D1)/A1)***

	A	B	C	D	E	F	G	H	I
1	N	n	(n/N*100) sau P =(B1/A1)*100	P / 100 C1/100	1.96 1.96	√(P*(1-P) /N) =sqrt((D1)* (1-D1)/A1)	ΔP F1*100	Min C1-G1	Max C1+G1
2	312	78	25	0.25	1.96	0.0120789	4.804845	20.19515	29.80485

Fig. 3. Preparations for the calculation of the margin of error by using the "Excel" computer program.

	A	B	C	D	E	F	G	H	I
			P	*P%/100*		*√P*(1-P)/N*	*ΔP*	*min*	*max*
	N	***n***	***=(B1/A1)*100***	***C1/100***	***1.96***	***=sqrt((D1) *(1-1)/A1)***	***F1*100***	***C1-G1***	***C1+G1***
1	N1=312	78	25	0.25	1.96	0.024515	4.804845	20.19515	29.80485
2	312	39	12.5	0.125	1.96	0.018723	3.669761	8.830239	16.16976
3	312	32	10.25641	0.102564	1.96	0.017176	3.366497	6.889914	13.62291
4	312	21	6.730769	0.067308	1.96	0.014185	2.780227	3.950542	9.510997
1	N2=174	78	44.82759	0.448276	1.96	0.037702	7.389501	37.43809	52.21709
2	174	39	22.41379	0.224138	1.96	0.031614	6.196285	16.21751	28.61008
3	174	32	18.3908	0.183908	1.96	0.029369	5.756405	12.6344	24.14721
4	174	21	12.06897	0.12069	1.96	0.024696	4.84047	7.228495	16.90944
1a	n1 = 27	6	22.22222	0.222222	1.96	0.080009	15.68179	6.54043	37.90401
2a	27	10	37.03704	0.37037	1.96	0.092935	18.21524	18.8218	55.25228
3a	27	10	37.03704	0.37037	1.96	0.092935	18.21524	18.8218	55.25228
4a	27	1	3.703704	0.037037	1.96	0.036345	7.12356	-3.41986	10.82726

Fig. 4. The result of the calculation made by using the "Excel" computer program.

[11] Bălăşescu 2000, 173.

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- G – margin of error – ΔP: In cell ***G*** *we write:* ***"F1*100"***

- H – the minimal possible value (*min)* of the empirical percentage(P): In cell ***H*** *we write a formula:* ***=C1-G1***

- I – the maximal possible value (*max)* of the empirical percentage(P): In cell ***I*** *we write a formula:* ***= C1+G1***

Interpretation of the results

From the total number (NR=312) of the bones just 174 (55.76%) had been determined, out of which:

Bovids – 78 bones, (45%) 44.827±7.392% or 7.438 – 52.217 %

Caprines – 39 bones, (24%) 22.413±6.3459% or 16.217 – 28.610%

Suids – 32 bones, (20%) 18.390±5.756% or 12.634 – 24.147%

Cabalines – 21 bones, (12%) 12.068±4.840% or 7.228 – 16.909%.

Among the determined bones had been identified a number (n1=27) of individuals (NMI):

Bovids – six individuals, 22.222%±15.681% or 6.540 – 37.904%

Caprines – 10 individuals, 37.037%±18.215% or 26.4684 – 49.5316%

Suids – 10 individuals, 37.037%±18.215% or 26.4684 – 49.5316%

Cabalines – one individual, 3.703%±7.123% or 0.0 – 10.827%.

	Animal species	NR	%	ΔP (±)	Interval (min-max)	NMI	%	P (±)	Interval (min-max)
1	Bos taurus	78	78	44.82759	37.438-52.217	6	22.222	15.681	6.540-37.904
2	Ovis aries\Capra hircus	39	39	22.41379	16.217-28.610	10	19.565	14.963	18.821-55.252
3	Sus domesticus	32	32	18.3908	12.634-24.147	10	19.565	14.963	18.821-55.252
4	Equus caballus	21	21	12.06897	7.228-16.909	1	7.123	10.628	0.0-10.827
5	???	4	4	2.298851	0.072-4.525				
	Total	174	100			27	100		

Fig. 5. The presence of animal bones (*apud* A. Bălăşescu).

For a better presentation we transform these data into the following table:

From the analysis of this table results that by using the number of individuals (NMI=27) we cannot establish the ranking of the animals for the tribes of the Coslogeni culture. But, if we used on the same purpose the number of bones (NR=174) we can find that just the bovid bones (37.438 **–** 52.217%) could be interpreted as being the preferred species, ranking the first. Concerning other species, they take the following positions.

Example no. 2

In the Preliminary study of the faunal materials discovered in the site from Feteşti (comm. Adâncata, Suceava County) paleozoologists tell us that they, by "*using the customary methodology, that specific to archaeozoology*" they studied the "*archaeozoological material recovered after the first five consequent archaeological campaigns (2000-2004), undertaken in this site and belonging to the Cucuteni culture, phase A and B and Horodiştea-Erbiceni*"[12].

The Cucuteni A layer was represented by bones with species determination (NR=104), out of which n=79 (75.96%) had been assigned to the domestic animals and n=24 (24.04%) belonging to the wild species. The Cucuteni B layer, according to the data contained bones with species determination (NR=269), out of which n=221 (82.16%) of domestic mammals and n=48 (17.84%) belonging to the wild ones. The Horodiştea-Erbiceni layer had bones with species determination (NR=76), out of which n=60 (78.95%), being assigned to the domestic mammals and n=16 (21.05%) to the wild mammals. Calculating the percentages from different samples, the authors had done a comparison between them as being equally[13]. But, the truth is that this empirical percentages (P) had a different margin of error (ΔP), being of ± 4.19% for the Cucuteni A layer, of ± 2.334% for the Cucuteni B one, for Horodiştea-Erbiceni reaching ± 4.67% (Fig. 6).

Then, comparing the data about the main ranking animals in the investigated cultural layers, the authors tell us that in the Cucuteni A layer the suids have the main rank (25%), being followed by the ovicaprines (24.03%) and bovids (23.07%). the dog (3.84%) ranking the last. We have calculated ΔP for these percentages (P) and we had

[12] Cavaleriu, Bejenaru 2007.

[13] Cavaleriu, Bejenaru 2007, 499, fig. 2.

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		N	NR	%	ΔP (±)	min	max
1	The Cucuteni A layer	104	79	75.96154	4.190188	71.77135	80.15173
		104	24	23.07692	4.131432	18.94549	27.20836
2	The Cucuteni B layer	269	221	82.15613	2.33447	79.82166	84.4906
		269	48	17.84387	2.33447	15.5094	20.17834
3	The Horodiştea-Erbiceni layer	76	60	78.94737	4.676439	74.27093	83.62381
		76	16	21.05263	4.676439	16.37619	25.72907
	Total	449	448				

Fig. 6. The presence of the animal bones discovered in the site from Feteşti (*apud* Cavaleriu and Bejenaru).

		N	NR	%	ΔP (±)	min	max
1	The Cucuteni A layer	104	26	25	8.322236	16.67776	33.32224
		104	25	24.03846	8.212769	15.82569	32.25123
		104	24	23.07692	8.097607	14.97932	31.17453
		104	4	3.846154	3.696035	0.150119	7.542189
			79				

Fig. 7. The presence of the animal bones in the Cucuteni A layer (*apud* Cavaleriu and Bejenaru).

reached the conclusion that none of the mammals was ranking the first. Here is the percentage of the margin of error: 25 ± 8.32%, 24.03±8.21%, 23.07 ± 8.09%, 3.84 ± 3.69% (Fig. 7).

We can notice the same thing in the Cucuteni B layer, where the authors considered that bovids were ranking the first (29.36%), being followed by the suids (27.13%) and ovicaprine (24.16%). We add ΔP and we notice that we cannot make a clear distinction the ranking of a certain animal

Much seldom the investigators of the archaeological sites of the stone age had used percentages or their reports for making a description of the discovered materials. Sometimes, even if the collections are not extensive, the researchers start calculating the percentages.

Example no. 3

Therefore, in an article[14] where the sample contained 98 units, the authors had rendered the

		N=269	NR	%	ΔP (±)	min	max
2	The Cucuteni B layer	bovids	79	29.36803	5.442745	23.92528	34.81077
		suids	73	27.13755	5.313946	21.8236	32.45149
		ovicaprines	65	24.16357	5.115633	19.04794	29.2792
			217				

Fig. 8. The presence of the animal bones in the Cucuteni B layer (*apud* Cavaleriu and Bejenaru).

species among those mentioned above: bovids – 29.36±5.44%, suids – 27.13±5.31%, ovicaprines – 24.16±5.11% (Fig. 8).

Just for the Horodiştea-Erbiceni layer the authors were right, when mentioning that the bovids had reached a high percentage (44.73±11.17%) being followed by the suids (18.42±8.71%) and ovicaprines (13.15±7.59%) both of them ranking the second (Fig. 9).

discovered objects in a table where, besides the amount of the finds, they also established the empirical percentages. We had added the margin of error and the trusting intervals (Fig. 10).

The analysis of table 10 shows that the most numerous are the categories no. 5, 11, 7 and. At first sight, by the empirical percentages, these categories had the following positions: category 5 the first one, category 11 the second, category 7 the third

		N=76	NR	%	ΔP (±)	min	max
3	The Horodiştea-Erbiceni layer	bovids	34	44.73684	11.17892	33.55792	55.91576
		suids	14	18.42105	8.715565	9.705488	27.13662
		ovicaprines	10	13.15789	7.599896	5.557999	20.75779
	Total		58				

Fig. 9. The presence of the animal bones (*apud* Cavaleriu and Bejenaru).

[14] Britiuk, M. Udovichenko, O. Udovichenko 2005, 42-53.

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Categories	N	P (%)	ΔP (±)	min	max
1	6	6.122449	4.746642	1.375807	10.86909
2	4	4.081633	3.917517	0.164116	7.99915
3	1	1.020408	1.98977	-0.96936	3.010178
4	4	4.081633	3.917517	0.164116	7.99915
5	30	30.61224	9.124983	21.48726	39.73723
6	8	8.163265	5.421047	2.742218	13.58431
7	10	10.20408	5.993193	4.210888	16.19728
8	4	4.081633	3.917517	0.164116	7.99915
9	3	3.061224	3.410668	-0.34944	6.471892
10	1	1.020408	1.98977	-0.96936	3.010178
11	26	26.53061	8.741176	17.78944	35.27179
12	1	1.020408	1.98977	-0.96936	3.010178
Total	98	100%			

Fig. 10. The presence of the animal bones (*apud* Britiuk *et alii*).

and category 1 the fourth. But, after establishing the margin of error and the trusting intervals we can say that the flints in the category no. 5 are the first, category 11 is the second, wile the others are on the third position.

In another article[15], the lithic inventory, comprising 185 units, had been rendered by the number of the discovered items, while the percentages are used by the researchers just to render the size of the lack of patina.

Example no. 4

The well known Russian archaeologists, investigators of the stone age monuments had described on one of their articles what they experienced by statistical grouping of the Upper Paleolithic of the Eurasia, in which percentages had played a significant role. By percentages had been rendered not only the number of artefacts in the complexes, but also some categorizations. In their work they give an example of such a group and reveal the mechanism of creating the data bases used for processing by using the computer[16]. The authors had also advanced a method for an optimal grouping as a variant among the options of processing the archaeological data by using statistical-mathematical methods. For the statistical analysis the scientists had used the data about 54,945 stone implements in 308 Paleolithic complexes in Northern Asia, Central Asia, Siberia, Middle East, Ural the plains of the Eastern Europe, Caucasus and some other territories. By this grouping 29 categories had been created, in which had been included an average of 177 artefacts. For more comfortable presentation of the proportion for each group of implements in the entire sample, the percentages had been used (empirical percentage). With a uniform distribution of implements in 29 categories, each of the latter could contain 1,895 artefacts, or 3.47% out of the total. Therefore, according to the author, the implements of the 9th category comprised 11,435 racloirs, which represented 20.81%. Still, there are also categories with very few artefacts, like the polishers **–** 7 items or 0.01%. Despite that, we should observe that, even with such a large sample used by the authors for the operational procedures, it has a margin of error that was not considered and could subsequently affect the general conclusions and other inferences. This is why, for the communities and samples of the authors we have established and added the possible margin of error for a probability level of 95%.

Thus, 1,895 implements didn't reach 3.47%, as showed by the authors, but 3.448903%. The margin of error is of ± 0.152585% while the real values are encompassed in the interval of 3.29% - 3.60%. The implements of the 9th category -11 435 raclettes reached 20.81%, while the margin of error is of ± 0.339%, in the interval 20.472% - 21.151%. Regarding the seven polishers that, according to the authors reached 0.01274%, their margin of error is of ±0.009437% in the interval 0.003303% - 0.022177%.

Example no. 5

By analysing the repertory of the flint finds (N=1,492) in the stone age settlements of the Ingul river basin (Nikolaev region, Ukraine), the specialists had noticed that the richest category was represented by the splinters with 66.8±3.39%, out of which some are small "nappes" (707) and small splinters (290)[17]. The main category of all implements (N1=69) is represented by microlithes (n=22). They are the first rank among the implements. As another important group the authors

[15] Shestakov, Vybornyi 2005, 54-60.

[16] Derevianko, Felinger, Holyushkin 1989.

[17] Stanko, Grigorieva 1977, 37-51.

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had mentioned the scrapers (n=12). To this they added the retouches blades (n=32), about which they said that "*they are of different types and character*". Therefore, at the implements the authors had assigned 69 items that we should consider as being 100%. Then, each group should have its own percentage (Fig. 11):

	Artifacts	n	P	ΔP(±)	min – max
1	-microlithes	22	31.88	± 10.99%	20.89 – 42.87
2	-scrapers	12	17.39	± 8.94%	8.45 – 26.33
3	-retouches blades	32	46.38	± 11.75%	34.63 – 58.13
4	-retouches splinters	3	4.35	± 4.8%	0 – 9.15
	total	69	100%		

Fig. 11. The presence of the flint artifacts in the settlement from Ingul river (*apud* Stanko, Grigorieva).

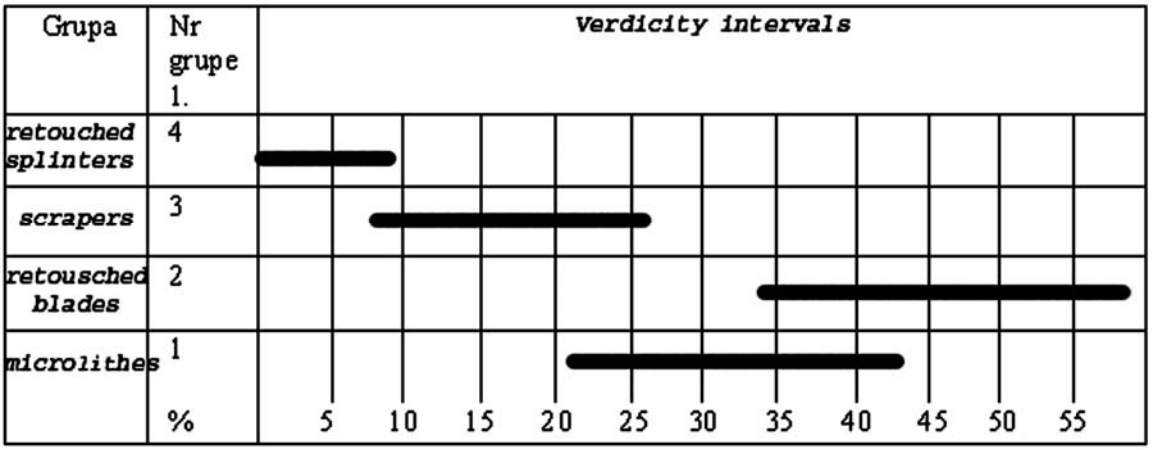

Fig. 12. Veridicity intervals for the flint artifacts in the settlement from Ingul river.

The sample is not too big and the credibility of the provided percentages is doubtful. We will create here veridicity intervals by using the up mentioned mode (Fig. 12).

From the analysis of table no. 12 we could infer, on a hand that the retouched splinters and scrapers could not be distinguished between them and this is why they formed a single group. On the other side, the retouched blades are well distinguished compared with the retouched splinters and scrapers. If we put in a single group the microblades and scrapers (the most frequent implements in the opinion of the authors) this group will be also not able to be distinguished from the one of the retouched blades.

The analysis of the table does not enable us to draw a conclusion as any of the studied groups could rank first. Better said, the idea of the authors that the microblades are mainly statistical could not be certified.

Example no. 6

In the Măgura commune, Teleorman county it was discovered a complex, N 13, containing lithic material, belonging to the Criş culture[18]. It comprised 40 items. The archaeologist had understood that the sample was very small yet, by using percentage calculations, he expressed his opinions, like: "*the largest part of the complex (40%) had been retouched", or "in the complex predominated …*". For a sample comprising just 40 items the margin of error is very large. Concerning these 40%, in reality these are just the empirical percentage, to which we need to add the margin of error of ±15.18% and then we can have a picture closer to the truth. The interval of the values is 24.72 % – 55.18%, which means that the "*retouched part of the complex*" renders 40% ±15.18% or varies between the values of 24.72 % and up to 55.18%.

Example no. 7

During the archaeological campaign of the year 2004 on the Popina Borduşani, Ialomiţa county were been discovered 114 items made of flint and other rocks. From the analysis of the data, it could be observed "*a predominance of the retouched blades, followed by the gratoires on the blade and the simple splinters with use traces*"[19]. From the presented table results that the retouched blades are in number of 24 and they reach 21.5%, the gratoires on the blade are 19 (16.66%) while the simple splinters are 14 (12.28%). We have calculated ΔP for these percentages the following: ±7.48%, ±6.84%, ±6.025%. A comparison of the value inter-

[18] Pannett 2005, 231-234.

[19] Popovici *et alii* 2005, 69-72, 477-478.

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vals show that they could be easily distinguished and it is sure that any category could be placed in the first position:

- The retouched blades n=24 – 21.5% ±7.48% = 14.02% - 28.98%.

- Gratoires on the blade n=19 – 16.66% ±6.84%= 9.82% – 23.5%.

- Simple splinters n=16 – 12.28% ±6.02%= 6.26% – 18.3%.

Example no. 8

In a collaboration paper between archaeologists from Kiev and Sankt-Petersburg it is presented a detailed characteristic of the research in the region of the Ingul river, undertaken between 1966-1976[20]. Based upon them it was made a classification of the burials belonging to the Yamnaya culture in the basin of the Ingul river. A number of 216 burials of this culture were parted by the authors of this study into six main types (Fig. 13).

Checking the data by using the veridicity intervals we could find that the categories 1 and 4 could be easily distinguished, but we cannot say the same thing about the types 2, 3, 5 and 6, which cannot be differentiated. We should point out here that:

- type 1 is represented by burials with skeletons laid on their back and slightly flexed legs, whose pits had been covered with stone;

- type 4, burials with skeletons laid on their back and slightly flexed legs, in pits covered with wood;

- types 2, 3, 5, 6 are burials with skeletons flexed on a side, in pits covered with stone or wood.

For this table, we have rendered the results by using a graph, showing the veridicity intervals (Fig. 14).

From the table below we can infer that just the burials specific to the types 1 and 4 with skeletons laid on their back and slightly flexed legs could be distinguished from the other types. Moreover, the burials of type 1 covered with stone predominate over those of type 4, while those with skeletons flexed on a side in pits covered with stone (2, 3) or wood (5, 6) could not be distinguished.

Further on, the authors, relying upon the percentage calculations (Fig. 15), mentioned that among the burials of the Yamnaya burials with grave goods could be distinguished those of the types 5 and 6, which reached 36% and 23% respectively. However, the empirical percentages

N=216

	Burials covered with stone n1=119					Burials covered with wood n2=97				
Type	n1	P(%)	ΔP(±)	min	max	n2	P(%)	ΔP(±)	min	max
1	81	37.5	6.456317	31.04368	43.95632	-	-			
2	21	9.72	3.950958	5.771264	13.67318	-	-			
3	17	7.87	3.591091	4.279279	11.46146	-	-			
4	-	-				52	24.07	5.70163	18.37244	29.7757
5	-	-				19	8.79	3.777334	5.018963	12.57363
6	-	-				26	12.03	4.339492	7.697545	16.37653
Total	119	55.09	6.633379	48.45921	61.72597	97	44.89	6.633379	38.27403	51.54079
%	55.09					44.89				

Fig. 13. Burial types of the Early Bronze Age.

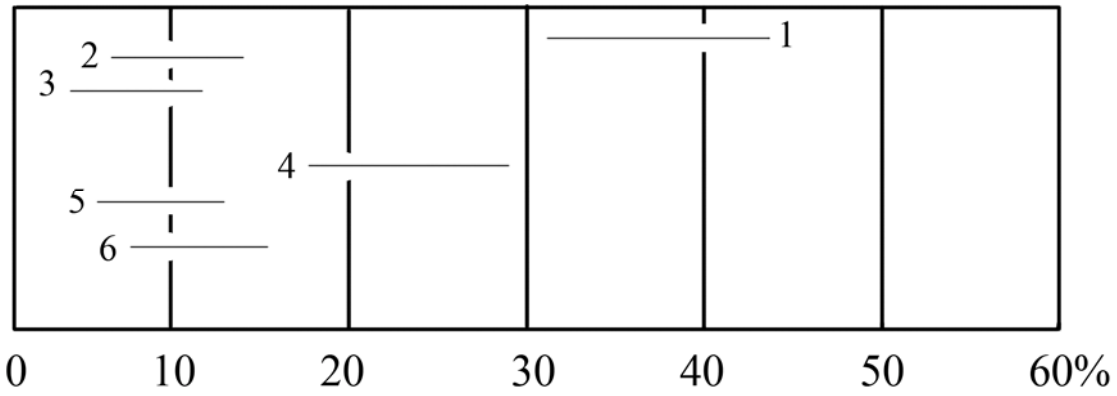

Fig. 14. Distribution of the Bronze Age burials by using the veridicity intervals, 1, 2, 3 – burials covered with stone; 4, 5, 6 – burials covered with wood; 1, 4 – burials with skeletons laid on their back and slightly flexed legs; 2, 3, 5, 6 – burials with skeletons flexed on side.

[20] Shaposhnikova, Bočkarev, Sharafutdinova 1977, 7-36.

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	Grave goods of the burials with stone						Grave goods of the burials with wood					
Tip	N	n	P(%)	ΔP(±)	min	max	N	n	P(%)	ΔP(±)	Min	max
1	81	10	12.34	7.1640	5.18	19.50	-		-			
2	21	4	19.04	16.79	2.25	35.84	-		-			
3	17	2	11.76	15.31	0	27.08	-		-			
4	-		-				52	8	15.38	9.80	5.57	25.19
5	-		-				19	7	36.84	21.69	15.15	58.53
6	-		-				26	6	23.07	16.19	6.88	39.27
Total	119	16	13.44	6.12	7.31	19.57	97	21	21.64	8.19	13.45	29.84

Fig.15. The Yamnaya culture burials with grave goods.

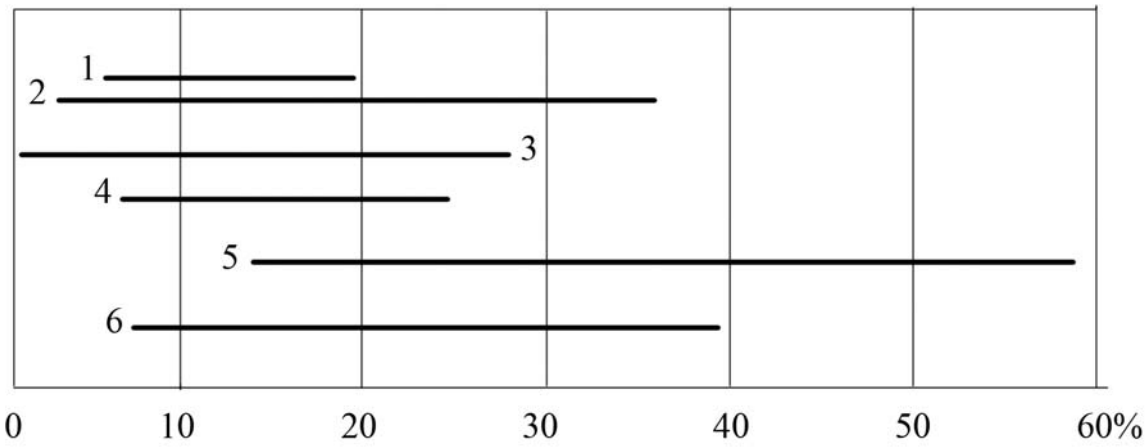

Fig. 16. Distribution of the Yamnaya culture burials with grave goods after the analysis of the veridicity intervals.

which were established upon insufficient samples and this is why the margin of error (ΔP) is a considerable one, varying between ±7% until ±21%.

The analysis by the "*presence of the grave goods*" that we carried out pointed out that any type was distinct from the others and could not be done any differentiation between the intervals of the types, all of them being crossed with each other. The visual representation demonstrates this situation (Fig. 16).

Example no. 9

The archaeologist Kovaleva Irina from the Ukraine had discovered on the banks of the Oreli river – the left tributary of the Dnepr a Neo-Eneolithic necropolis[21]. It contained 90 burials belonging to the Neolithic time. Part of them (n1=58) were situated on a line, while the other one (n2=32) was out of it. As an important aspect, the researcher has noticed the presence of the double "marital" burials (man and woman). Comparing their weight in a line (9 of 58) with those similar ones out of the line (of 32) she considered that the percentage of those in the line is "*essentially bigger*" than those out of the line. We have established the margin of error and the trusting intervals for that:

3 of 32 = 9.37% ±10.09% = 0-19.46%

9 of 58 =15.51% ±9.31%= 6.2-24.82%.

Now it is easy to get convinced that this opinion has literally no statistical basis. The situation is not changed even if we would calculate the percentage of the double "*marital*" burials in the general number of all burials of the necropolis (N=90):

3 of 90 = 3.33% ±6.7%= 0-10.3%

9 of 90 = 10.0 % ±6.2% =3.8-16.2%.

Bronze Age	*Burials*	*Collective*			*Individual*			*Total* **N**
	Culture	**n**	**P or %**	**DP**	**n**	**P sau %**	**DP**	
Early period	Yamnaya	4	5.8	5.51	65	94.2	5.51	69
Middle period	Catacombnaya	2	9.53	12.55	19	90.47	12.55	21
Late period	Srubnaya	6	2.7	2.12	217	97.3	2.12	223
	Total	12	3.8	2.11	301	96.16	2.11	313

Fig. 17. Distribution of the collective burials of the Bronze Age (*apud* the data of N. Ryčkov).

[21] Kovaleva 1977, 46-49.

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Thus, we could not discuss about the "*essential prevalence of the marital burials in the line*". Still, we could notice the existence of a trend in making "*marital*" burials (n=12), which reaches 13.33%±7.02% or 6.31%-20.35% and this is what we can statistically prove. The trusting intervals of the individual burials group (n=78 reaches 86.67±7.02% or 79.64%-93.68%) and the "*marital*" ones (n=12 reached 13.33%±7.02% or 6.31%-20.35%) and do not cross with each other.

Example no. 10

Here we will refer to the aspect regarding the study of the collective burials of the Bronze Age as tackled by the archaeologist Nikolai Ryčkov from the Ukraine[22]. He had reached the conclusion that the number of collective burials in the Eastern region (Volga) increased beginning with the Yamnaya culture (the Early Bronze Age) towards the Catacombnaya culture (the Middle Bronze Age) and then briskly decreased in the Srubnaya culture (the Late Bronze Age). We relied in that assumption by establishing the empirical percentages (Fig. 21). with a general sample of 313 units (Fig. 17).

In order to check the truthfulness of these conclusions, based upon the percentage reports we have calculated and added the ΔP reaching the conclusion that Ryčkov was mistaken and his conclusion was not correct. A graph could rightfully proof this thing (Fig. 18).

All intervals are being crossed with each others, which means that the difference between the empirical percentages (P) without the margin of error (ΔP) is just an imaginary one(Fig. 18). Still, it is interesting that the same author, in another paper[23] had suggested that we should consider the error of any percentage calculations and recommended the quantity of the archaeological material of at least 381 units that, in his opinion, was the optimal sample for the research.

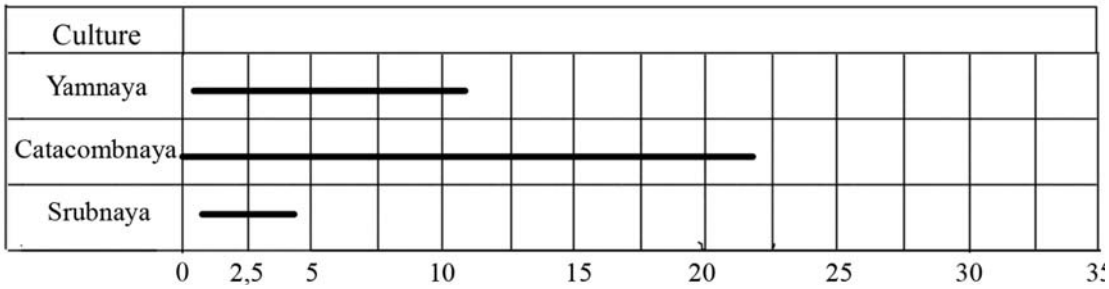

Fig. 18. Checking the veridicity intervals for the collective burials of the Bronze Age.

Example no. 11

In a monograph dedicated to the study of the Andronovo culture of the Late Bronze Age, its author V. S. Stokolos considered the orientation of 260 burials[24]. He had divided all of them into three categories:

1 – with a north-south orientation (N-S).

2 – with a parallel orientation (E-V).

3 – with an intermediate orientation, under the angle of 45°.

The author had created for them a special table, where all burials had been included, according to their orientation and the necropolis to which they had belonged, also keeping with the chronological order. The quantity of burials had been transformed into empirical percentages. The next step of the scientist was the comparison of the empirical percentage between them and based on this analysis he drew the conclusion that the increasing number of the parallel burials in the early phase (Alakul') towards the late one (Alexeevka) could be interpreted as a trend with the character of a rule[25].

	Necropolises	Alakuli	Cerneaki-I	Cerneaki-II	Tastî-Butak	Alexeevka
Orientation	**N**	40	156	31	78	16
N-S	**P şi ΔP**	37.5 ±15.33	26.7± 6.94	6.8 ±8.86	14.4 ±7.79	12.5±16.2
E-W	**P şi ΔP**	27.5±13.84	36.3 ±7.55	67.4±16.5	72.3± 9.93	75.0± 21.22
SE-NW SW-NE	**P şi ΔP**	35.0 ±14.78	27.0 ±6.97	25.8 ±15.4	13.3 ±7.54	12.5 ±16.20

Fig. 19. Orientation of the Andronovo burials.

[22] Ryčkov 1982, 85-103.

[23] Ryčkov 1982, 16-178.

[24] Stokolos 1972, 105-110.

[25] The trend with the character of a law, based on the studied materials, means the discovery of some more or less veridical dependencies.

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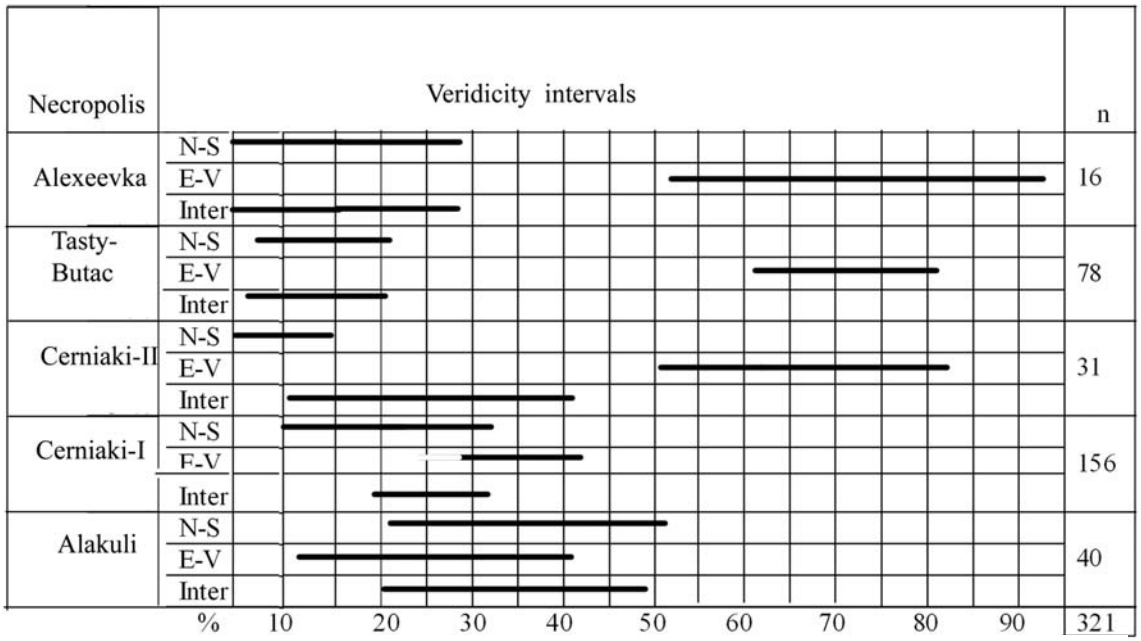

Fig. 20. Veridicity intervals for the burials of the Andronovo culture burials.

Dwelling	*No of fragments*	*Rims*	*Bottoms*	*Ornamented walls.*	*Estimated no. of vessels*	*%*		*Undecorated fragments*
	A	**B n/ %**	**C n/ %**	**D n/ %**	**E**	**E/A**	**A/E**	**F=A-(B.C.D)**
2	120	31/25.8	8/6.666	20/16.66	15	12.5	8	61/50.833
3	251	69/27.49	22/8.764	37/14.74	30	11.95	8.366	123/49.00
4	280	171/61.07	42/15.0	124/44.28	40	14.28	7	57/20.357
5	399	102/25.56	28/7.017	76/19.047	50	12.531	7.98	193/48.37
6	210	37/17.619	15/7.142	54/27.142	35	16.666	6	104/49.52
7	150	54/36.0	24/16.0	30/20.0	27	18.	5.555	42/28.0
8	124	31/25.0	10/8.064	47/37.9	26	20.967	4.769	36/29.032
9	473	64/13.53	36/7.61	107/22.62	45	9.513	10.51	266/56.236
10	509	90/17.681	36/7.072	68/13.359	50	9.823	10.18	315/61.886
Total	**2516**	**649**	**221**	**563**	**318**	**12.639**	**7.911**	**1083/43.044**

Fig. 21. Distribution of the pottery in the Bronze Age dwellings of the Pustynka settlement.

We will further study the data of the author, to which we will also add the margin of error (Fig. 19).

Now we calculate the trusting intervals for the percentages in the table and we create a new table containing them (Fig. 20).

The analysis of this table enables us to draw the following conclusions:

– in the necropolises Alakuli and Cerneaki-I the burials with different orientations could not be distinguished from each other;

– in the necropolises Cerneaki-II, Tasty-Butak and Alexeevka we could see that the burials with a parallel orientation predominate and seem to be clearly differentiated from the burials with other orientations;

– the trend of increasing the number of burials with a parallel orientation with the character of a rule from Cerneaki-II to Alexeevka could not be baked up by the existing results;

– regarding their number, the burials with a north-south orientation and the intermediary ones from the necropolises Cerneaki-II, Tasty-Butak and Alexeevka would stay behind those with a parallel orientation but they are not distinguished from each other.

Further on, V. S. Stokolos, maintaining its division of three main orientation, brings variants of the absolute orientation, where he sees an essential fact – the impetuous increase of the orientation to the West, which is completely missing in the necropolis from Alexeevka.

Upon the data of the author we have calculated the trusting intervals, and have created a table and reached the conclusion that this is now way to obtain a more clear image about orientation. This is why we studied separately the parallel orientations, leaving aside the others. In the end we have found that the necropolis from Alexeevka was represented just by burials with an eastern orientation. Tasty-Butak – just by a western one,

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	Dwelling	No. of fragments	Rims	Buttoms	Decorated walls	Estimated number of vessels	Reports				Undecorated fragments	Estimated number of vessels
		A	**B**	**C**	**D**	**E**	**E/A ± ΔP**	**A/E**	**B/E**	**D/E**	**n /P%**	**A/8**
1	2	120	31	8	20	15	12.5±5.917 6.583-18.417	8	3.875	1.33	61/50.83	15
2	3	251	69	22	37	30	11.95±4.012 7.938-15.962	8.366	2.3	1.23	123/49.00	31.37
3	4	280	171	42	124	40	14.28±4.098 10.182-19.26	7.0	4.275	3.1	57/20.35	35
4	5	399	102	28	76	50	12.531±3.248 9.283-15.779	7.98	2.04	1.52	193/48.37	49.87
5	6	210	37	15	54	35	16.666±5.040 11.626-1.706	6.0	1.057	1.54	104/49.52	26
6	7	150	54	24	30	27	18. ± 6.148 11.852-24.148	5.555	2.0	1.11	42/28.0	18.75
7	8	124	31	10	47	26	20.967±7.165 13.802-28.132	4.769	1.192	1.80	36/29.03	15.5
8	9	473	64	36	107	45	9.513±2.644 6.869-12.157	10.51	1.422	2.37	266/56.236	59
9	10	509	90	36	68	50	9.823±2.585 7.238-12.408	10.18	1.8	1.36	315/61.886	63
	Total	2516	649	221	563	318	12.639±1.298 11.34-13.937	7.911	12.98	1.77	1083/43.04	314.5

Fig. 22. Looking for a way of rendering the estimated number of vessels of the Bronze Age in the settlement from Pustynka.

while in the Cerneaki-I and Cerneaki-II the western orientation predominated, but also existed a smaller group of burials with a slight orientation to the east. In the necropolis from Alakuli the eastern and western orientations are equally present. Therefore, the opinion of V. Stokolos about the trend with the character of a rule about the change of orientation from west to east could not be statistically be proven yet.

Example no. 12

In the analysis for the excavations the pottery has a great importance but, usually, it is seldom represented by complete vessels. The archaeologists normally work with ceramic fragments. A very interesting trial had been done by Sofia Berezanskaya who had tried, by using the percentages, to establish the quantity of vessels in the settlement of the Eastern Tshtsinetskaya of the Bronze Age[26]. The author had counted the general quantity of fragments, out of which the rims, bottoms and decorated walls had been emphasized and afterwards it was estimated the number of vessels[27]. Still, for the readers of that paper remained unclear the procedure used for obtaining that result. We will further try to decipher the respective method used by the mentioned author. We will present below the data of the scientist, by adding several new reports (Fig. 21):

Firstly, we have calculated the empirical percentages (P) for each category of objects (B, C, D) as well as the percentage of the estimated quantity of the vessels compared to the one of the fragments (E/A and A/E). Figure 22 has also included the percentages reports between the rims and the estimated number of vessels (B/E), walls and vessels (D/E). We have assumed that the report A/C for the dwelling no. 2 was used by the author as a reference point and this is why we have introduced the report A/8 for calculating the estimated number of vessels. The procedure was probably used for dwellings no. 2, 3, 4 and 5, but not for the dwellings no. 6-10. By comparing the figures in column E with those in column A/8, we could see that the

[26] Berezanskaya 1974.

[27] Berezanskaya 1974, 105, tab. 3.

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Grave types	N	%	ΔP	min	max
1a	84	68.85246	4.15221	68.43724	69.26768
1b	38	31.14754	6.17344	30.5302	31.76489
2	3	100	0		
3a	10	83.33333	21.0859	62.24743	100.
3b	2	16.66667	21.0859	0.	37.75257
4a	6	66.66667	5.92716	60.73951	72.59383
4b	3	33.33333	8.382271	24.95106	41.7156
5	2	100	0		
6a	1	50	34.64823	15.35177	84.64823
6b	1	50	34.64823	15.35177	84.64823
7	1	100	0	100	
8a	3	21.42857	5.092011	16.33656	26.52058
8b	11	78.57143	2.659216	75.91221	81.23064
9a	1	50	34.64823	15.35177	84.64823
9b	1	50	34.64823	15.35177	84.64823
10	1	100	0		
11	1	100	0		
12	1	100	0		
13	2	100	0		
14a	16	55.17241	2.250424	52.92199	57.42284
14b	13	44.82759	2.496622	42.33096	47.32421
15	1	100	0		
16	4	100	0		
Total	206				

Fig. 23. Distribution of the medieval graves by types (*apud* Ivanov and Kriger).

Grave types	N	%	DP	min	max
1a	84	40.7767	6.710808	34.06589	47.48751
1b	38	18.4466	5.296655	13.14995	23.74326
2	3	1.456311	1.635927	0.	3.092238
3a	10	4.854369	2.934832	1.919537	7.789201
3b	2	0.970874	1.339015	0.	2.309888
4a	6	2.912621	2.296391	0.61623	5.209013
4b	3	1.456311	1.635927	0.	3.092238
5	2	0.970874	1.339015	0.	2.309888
6a	1	0.485437	0.949144	0.	1.434581
6b	1	0.485437	0.949144	0.	1.434581
7	1	0.485437	0.949144	0.	1.434581
8a	3	1.456311	1.635927	0.	3.092238
8b	11	5.339806	3.070216	2.26959	8.410022
9a	1	0.485437	0.949144	0.	1.434581
9b	1	0.485437	0.949144	0.	1.434581
10	1	0.485437	0.949144	0.	1.434581
11	1	0.485437	0.949144	0.	1.434581
12	1	0.485437	0.949144	0.	1.434581
13	2	0.970874	1.339015	0.	2.309888
14a	16	7.76699	3.655039	4.111951	11.42203
14b	13	6.31068	3.320516	2.990164	9.631196
15	1	0.485437	0.949144	0.	1.434581
16	4	1.941748	1.884347	0.0574	3.826095
Total	206				

Fig. 24. Distribution of the medieval graves by their types.

method had not been used by the author for all the dwellings. It seems that the estimated number of vessels (30) for dwelling no. 3 resulted from the formula (C+D)/2=59:2=30. For the dwellings no. 6, no. 7, no. 8 and no. 10 the estimated number of vessels (35, 27, 26 and 50) it was calculated by using the same formula like the one employed for the dwelling no. 3-(C+D)/2. In order to understand the way the calculation of the estimated number of vessels had been done, we have also established the quantity of ceramic fragments without decoration (E) (Fig. 22).

Analysing the tables, we could say that we understood the "*scientific kitchen*" of the author and we have reached the conclusion that the respective scientist had done the estimated quantity of the vessels in an arbitrary way, without a clear procedure, which could have been followed. This means that in fact the method advanced by the author does not exist and it misleads other researchers as well.

Example no. 13

The Russian specialists, when arranging chronologically the graves of the nomadic populations in the 12th-14th centuries in the southern Ural region and in the region of the Ural Mountains, analysed just those containing grave goods. In a table they brought together the data, afterwards distributing the graves by their typology[28].

Using the data of the authors, we have calculated for them the margin of error as well as the trusting intervals (min.-max.) (Fig. 23). Still, we should note here the fact that in this table the authors had used the incorrect procedure when they took into consideration some samples containing a single unit (types 6, 7, 9, 10, 11, 12, 15) as 100%. Twelve out of those 23 types and subtypes had insufficient samples, which casts doubt about the typology used by the authors.

It would be probably more correct if the authors would have referred to the general sample of 206 units when calculating the percentages. Then we could have found that the graves of the type 1 (1a and 1b) predominated, those of types 2, 3, 4, 5, 8, 13, 14, 16 rank the second place, the third one being of the types 6, 7, 9, 10, 11, 12, 15 (Fig. 24).

Example no. 14

A Russian researcher, who studied the presence of the grave goods in the interments of the Saltov-Maiaki culture of the middle 8th c. AD reached the conclusion that two distinct trends had existed[29].

[28] Ivanov, Kriger 1988, 52, tab. 5.

[29] Savchenko 1986, 70-101.

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The first was the lack of the grave goods in the interments (43%) and the second with the presence of the grave goods (57%). At first sight, the trend of putting grave goods was more significant.

By constructing the veridicity intervals we have checked the conclusion of the researcher. By comparing the intervals for graves without goods 34.49% – 51.51% with those with grave goods 48.49% – 65.51% we could find that these trends could not be distinguished and we should admit that there is no back up for the conclusion of the author regarding the existence of these two categories. This idea is not acceptable. Most probably, the lack or presence of the grave goods require other explanations.

Example no. 15

The mathematical statistics is also used for the demographic analysis of the paleoanthropological materials. Unlike in archaeology, in paleoanthropology for the study of the data, there are customary used the statistical processing of the craniometric indices, the analysis of the average values by biometrical methods for the comparison of the skeletal series, the emphasizing of the morphological types based on a combination of indicators more often found etc.

In an article of Gh. Romanova, a Russian archaeologist from Sankt-Petersburg, when analysing the paleoanthropological materials discovered in a necropolis, he reached the conclusion that for a population group dated in the 4th c. BC "*the average level of mortality for the adults increases by all means for the adults between the age of 20-24 years and with the risk of possible death after the age of 40 years*"[30]. The author, according to the rules existing in anthropology, had emphasized five age groups: 1) 1-14 ani; 2) 15-34; 3) 35-44; 4) 45-54; 5) 55-65 (Fig. 25).

After constructing the veridicity intervals (Fig. 26) we could notice just two (2) clear groups: group no. 1 – included the age categories from 1-14 and 15-34, for which the possible level of the mortality has the intervals 20.1-31.9% and 23.6-36.0%: while the group no. 2 – included the age categories 35-44 and 55-65, for which the probable level of mortality is 8.2-17.3%. The group of age between 45-54 years didn't fit in any of the groups. Its veridicity interval cuts the one of the up mentioned groups. Even if it has certain properties specific to both groups and the probable mortality level is situated between 13.6-24.2%. in fact this level could be between 7.8% and 36%.

[30] Romanova 1986, 195-203.

	Age	Number N	%	ΔP±	Trusting intervals
1	0. -14	55	26.066	5.923	20.143-31.989
2	15-19	10			
	20-24	11			
	25-29	11			
	30-34	6			
	15-34	25			
		63	29.857	6.174	23.683-36.031
3	35-39	9			
	40-44	13			
	35-44	5			
		27	12.796	4.507	8.289-17.303
4	45-49	6			
	50-54	1			
	45-54	23			
		40	18.957	5.288	13.669-24.245
5	55-60	9			
	60-64	5			
	55-64	12			
		26	12.322	4.435	7.887-12.322
	Total	**211**	**100**		

Fig. 25. Trusting intervals for different ages.

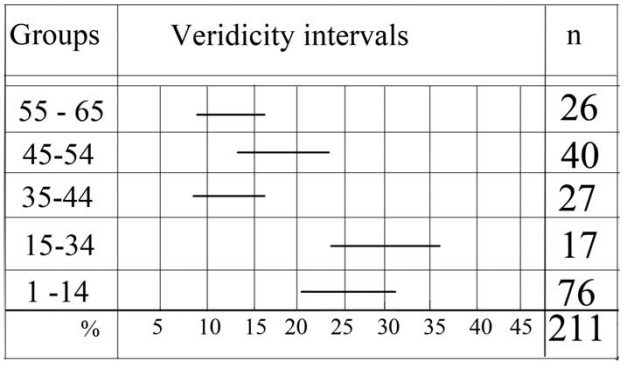

Fig. 26. Veridicity intervals for different age categories.

From the analysis of our table, by considering the trusting intervals we could see that there are just two groups of mortality, on different levels: 1- the highest one for the groups no. 1 and no. 2 with ages from 0-14 (20.143-31.989%) and 15-34 (23.683-36.031%) years; 2 – the lowest level for groups no. 3 and no. 5 with ages of 35-44 (8.289-17.303%), 55-64 (7.887-12.322%) years. Regarding the mortality level (8.289-17.303%) for group no. 3 with the age of 35-44 years, we could see that it has an intermediate position between the level of the group no. 5 on one hand and the level of group no. 4 for the age 45-54 years on the other hand. Therefore, the highest level of mortality (20%-36%) belongs to the age categories of 0-14 and 15-34 years, while the lowest mortality level (7.8%-17%) belongs to the old individuals in the age categories of 35-44 and 55-64 years.

Group	Age	Number N	%	ΔP±	Trusting intervals
1	0. -1	15	16.304	7.548	8.756-23.852
2	1-2.9	25	27.173	9.09	18.083-36.263
3	3-5.9	16	17.391	7.745	9.646-25.136
4	6-8.9	14	15.217	7.339	7.878-22.556
5	9-11.9	10	10.869	6.36	4.509-17.229
6	12-14.9	12	13.043	6.881	6.162-19.924
	Total	**92**	**100**		

Fig. 27. Trusting intervals for different ages.

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Now we could draw another kind of conclusion:

- statistically it is proven that: 1) there is a maximal level of the death probability in that population at the age category 1-34 years; 2) the minimal level is for the age categories of 35-44 years and 55-65 years; 3) regarding the age category of 45-54 years, it has an intermediate position between the previous two.

Therefore, the opinion of the researcher, who relied just on the calculation of the empirical percentages without considering the margin of error was not correct.

the children of 6-9 years (Group 4). The lowest level of the children mortality had been notices for the children with the age between 9-12 ani (Group 5 with 10.8%) that increased up to 14.1% (in fact -13.043%) for the children at the age between 12-15 years (Group 6).

The researcher goes even further, by saying that the distribution of the children by the age categories shows several peaks of mortality: the first – at the age category of 1-3 years (Groups 1 and 2) and the second at the age category between 12-15 years (Group 6).

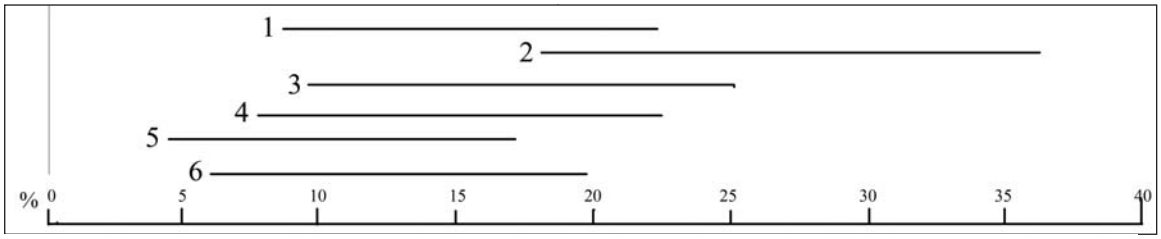

Fig. 28. Veridicity intervals for certain age categories.

Example no. 16

In an article the level of the children mortality in the Scythian period has been studied[31]. Based just upon empirical percentages, the author has drawn the conclusion that the largest number of children had died between the age of 1 year and up to 3 years (Group 2 with 27%). Afterwards the mortality level decreased up to 16% (in fact -17.391%) for the children of 3-6 years (Group 3) and 15% for

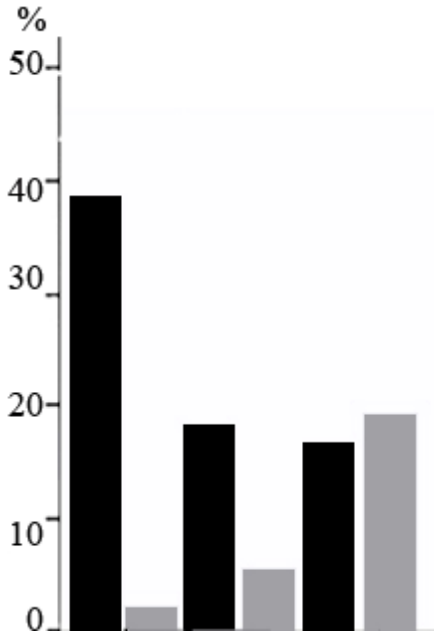

Fig. 29. The inhumation burials of different types (*apud* the data of V. Sîrbu). I – complete skeleton; II – skeleton without the skull; III – part of the skeleton; IV - skull; V – isolated bones; VI – unknown.

[31] Litvinova 2004, 144-181.

Unfortunately, these considerations must be established. From the analysis of the trusting intervals (Fig. 27) we could observe that we could discuss just about the age categories between 1-3 years (group 2) and 9-12 years (group 5), whose intervals are not cross-cut (18.083-36.263% and 4.509 - 17.229%), while other categories could not be distinguished as their intervals cross-cut the up mentioned categories (Fig. 28) and this is why we could say that the conclusion of the author is not statistically supported.

Example no. 17

In an article, Valeriu Sîrbu presented a graph (Fig. 29) with representations of a sample of inhumation burials of different types, by using the bar representation of the percentages[32].

This graph rendered empirical percentages (P), but it doesn't reflect the real rank of each type, due to the lack of calculation for the margin of errors and trusting intervals. We had processed the data of the graph presented by the author[33] and we calculated the margin of error and the trusting intervals (Fig. 30).

After the mentioned procedure we had the results which showed that the sample (N=196) is not too big, so that the margin of error (ΔP) varied between ±1.979% and ±6.837%. Still, we can discuss about the existence of the following groups (Fig. 31).

[32] Sîrbu 1997, 193-221.

[33] Sîrbu 1997, 207, fig. 3.

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Group 1 – type I (32.448 - 46.122%).

Group 2 – type III (12.946-23.788%), type V (12.045-22.647%) and type VI (13.408-24.366%) .

Group 3 – type II (0.061- 4.019%) and type IV (1.312-6.85%).

Concerning the typology forwarded by the author, we should mention that this is a vicious one. All studied graves are generally part of just three big categories:

I – graves with complete skeletons and

II – graves with incomplete skeletons, with subtypes or variants:

1) – skeletons without the skull; 2) part of the skeleton; (In this subtype could be included at the same time the graves which contained just the skull and those with single bones).

III – unknown graves are part of the sample, but they are not a specific type. Therefore, this sample could be re-grouped in the following manner (Fig. 32).

At first glance, it seems that the graves with incomplete skeletons (41.8%) are predominant in the funerary rituals of the Thracians, compared with those containing complete skeletons (39.28%). But, the margin of error and the veridicity intervals show us that they do not differ from each other. This thing is obvious if we look at the graph (Fig. 33).

Example no. 18

In this case we will take the analysis of the burials containing animal bones. The researchers Ekaterina Buneatean and Vitalii Otroščenko from the Institute of Archaeology of the National Academy of Sciences of the Ukraine, when studying the property forms upon domestic animals in the Bronze Age populations of the Eurasian steppe, have advanced some percentages about the different animal species, yet without giving also the quantity of the osteological materials that they used for this investigation[34]. Based upon these data they had reached some certain conclusions. Afterwards they divided the burials containing animal bones in three main areas (Fig. 34). According to their calculation it results that is the same picture all over the place, namely the burials with animal bones reach 12.3% -13.4% in each region. We should stress here the fact that the data selection and their clustering had been done by the author in a hazardous manner. Therefore, in the

[34] Buneatean, Otroščenko 1993, 93-131.

	Inhumations	N	P %	ΔP±	Trusting intervals
1	I -complete	77	39.285	6.837	32.448 - 46.122
2	II-skeleton without the skull	4	2.040	1.979	0.061- 4.020
3	III-part of the skeleton	36	18.367	5.421	12.946-23.788
4	IV-skull	8	4.081	2.77	1.311-6.851
5	V-isolated bones	34	17.346	5.301	12.045 -22.647
6	VI-unknown	37	18.887	5.478	13.398 - 24.356
	Total	196	100		

Fig. 30. Trusting intervals for the different grave types (*apud* the data of V. Sîrbu).

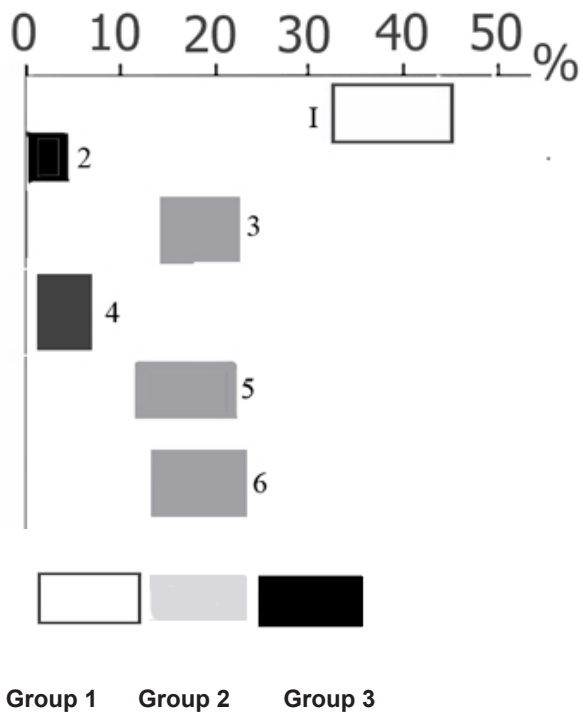

Fig. 31. Veridicity intervals for the different grave types.

	Inhumations	N	P %	ΔP±	Trusting intervals
1	I – complete skeletons	77	39.285	6.837	32.448 - 46.122
2	II – incomplete skeletons	82	41.836	6.906	34.930 - 48.742
3	III – unknown	37	18.877	5.478	13.398 - 24.356
	Total	196	100		

Fig. 32. Veridicity intervals for different grave types (*apud* the data of V. Sîrbu).

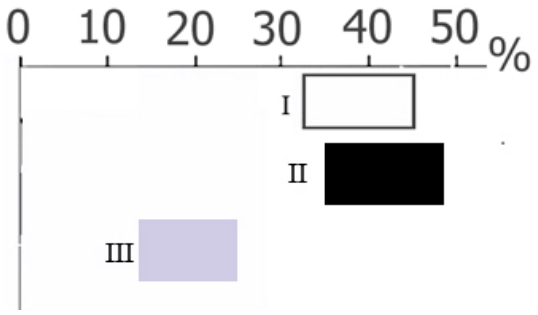

Fig. 33. The graph of veridicity intervals for different grave types (*apud* the data of V. Sîrbu).

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Geographic regions	Regions	Number of graves N	Number of graves with animal bones *n*	**P** or **%**	**ΔP or margin of error**	Veridicity intervals
Volga and Ural	Baškorstan	238	18	7.56	±3.36	4.2-10.92
	Samara	548	58	10.58	±2.57	8.01-13.15
	Saratov	149	38	25.5	±6.99	18.51-32.49
	Volgograd	517	60	11.6	±2.76	8.84-14.36
	Astrahani	47	11	23.4	±12.1	11.3-35.5
	total	*1499*	*185*	*12.34*	*±1.66*	*10.68-14*
Don and Donbas	Voronezh	248	38	15.32	±4.48	10.84-19.8
	Lugansk	79	5	6.33	±5.37	0.96-11.7
	Donetsk	168	21	12.5	±5.0	7.5-17.5
	total	*495*	*64*	*12.93*	*±2.95*	*9.98-15.88*
Lower Dniepr	Dnepropetrovsk	669	101	15.1	±2.71	12.39-17.81
	Zaporozh'e	489	55	11.24	±2.79	8.45-14.03
	total	*1158*	*156*	*13.47*	*±1.96*	*11.51-15.43*
	Total	***3152***	***405***	***12.84***	***±1.16***	***11.68-14***

Fig. 34. Veridicity intervals for different geographical regions.

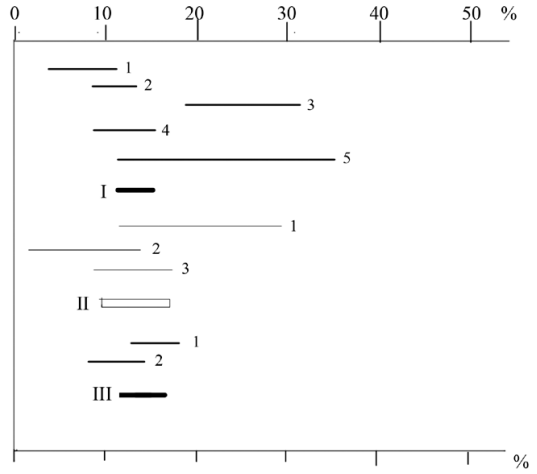

Fig. 35. Trusting intervals for different geographical regions.
Geographical regions: I – Volga and Ural, regions: 1 – Baškorstan. 2 – Samara. 3 – Saratov. 4 – Volgograd. 5 – Astrahani; II – Don and Donbas, regions: 1 – Voronezh. 2 – Lugansk. 3 – Donetsk; III – Lower Dniepr, regions: 1 – Dnepropetrovsk. 2 – Zaporozh'e.

Ural and Volga region have encompassed territories from distinct flora and climatic zones: steppe (Saratov and Volgograd), steppe-semi desert (Astrahan), silvo-steppe (Samara) and even forest (Baškorstan). The zone of the Don and Donbas render just the Upper Don basin and partly the Middle course of the Don with silvo-steppe, while the Lower Don (steppe) was not included at all. In this zone, the same like in the previous one had been put together the silvo-steppe (Voronež) and steppe regions (Lugansk, Donetsk). Just the zone of the Dniepr, in our opinion is presented almost correctly, as the Dnepropetrovsk region was rendered with the silvo-steppe and steppe. There are not known the reasons why the authors did not include in this zone the Kherson region (steppe) at the mouth of the Dniepr. But we should follow the data of the authors to which we have added the margin of error and the veridicity intervals (Fig. 34).

Based upon these data we can make the graph of the trusting intervals (Fig. 35).

When analysing the graph, we could observe the following facts: – in the Ural zone the number of burials containing animal bones in the region of the forests from Baškorstan (4.2-10.92%) and the neighbouring silvo-steppe one from Samara (8.01-13.15%) do not differ from each other but they are very distinct compared to the steppe zone of Saratov (18.51-32.49%); - the number of burials with animal bones in the steppe region of the Volgograd (8.84-14.36%) is clearly different from the steppe one of Saratov and resembles those of Baškorstan and Samara; - regarding the steppe-semi desert zone of Astrahani (11.3-35.5%) we should take into consideration the very small sample, which has a big margin of error and brings closer this region to those of Saratov and Volgograd.

After this analysis, it is clear that in the zone of Volga and Ural there are two other subzones: 1- the one of the forests and silvo-steppe from Ural (Baškorstan and Samara), represented by 76 burials containing animal bones in a sample of 786 graves, which means 9.669%±2.066% or 7.603%-11.735%; 2 – the one of the steppes in the Volga basin (Saratov, Volgograd and Astrahani) represented by 109 burials with animal bones in the sample of 713 graves, which means 15.287%±2.641% or 12.646%-17.929% (Fig. 36). The veridicity intervals are not cross-cut and are different. The number of burials with animal bones in the steppe zone of the Volga basin is larger and could be explained by the fact that animal breeding was more developed in the steppe zones than in the one of the forest and silvo-steppe. This is how

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	Geographical regions	Regions		Number of graves N	Number of graves with animal bones *n*	P or % n/N	P or margin of error	Veridicity intervals
I	Ural	Baškorstan	1	N1=238	18	2.29	±1.04	1.24-3.33
		Samara	2	N2=548	58	7.37	±1.82	5.55-9.20
		total		***N=786***	***76***	***9.66***	±2.06	***7.60-11.73***
II	Volga	Saratov	3	N1=149	38	5.0	±1.54	3.45-6.54
		Volgograd	4	N2=517	60	7.89	±1.91	5.97-9.81
		Astrahani	5	N3=47	11	1.44	±0.84	0.59-2.29
		total		***N=713***	***109***	***10.65***	±2.26	***8.39-12.92***
III	Don	Voronež	6	N=248	38	15.32	±4.48	10.84-19.8
		total		***N=248***	***38***	***15.32***	±4.48	***10.84-19.8***
IV	Donbas	Lugansk	7	N1=79	5	2.02	±1.75	0.26-3.78
		Donetsk	8	N2=168	21	8.50	±3.47	5.02-11.98
		total		**N=247**	**26**	**10.52**	±3.82	**6.69-14.35**
V	Lower Dniepr	Dnepropetrovsk	9	N1=669	101	8.72	±1.62	7.09-10.34
		Zaporozh'e	10	N2=489	55	4.74	±1.22	3.52-5.97
		total		***N=1158***	***156***	***13.47***	±1.96	***11.51-15.43***
		Total		***3152***	***405***	***12.84***	±1.16	***11.68-14***

Fig. 36. Veridicity intervals for different geographical regions.

we could emphasize a certain trend – the increase of the burial number with animal bones in the regions where animal breeding is more developed.

In the region of Don and Donbas, according to the veridicity intervals all regions are cross-cut and the presence of animal bones in the burials reaches the average value of 12.93%±2.95% or 9.98%-15.88% (Fig. 37). This hint resembles the data of the Samara and Volgograd regions. But, we should stress that in the mentioned area the authors had included also the silvo-steppe region of Voronež, in which can be found 50% of the entire sample of the respective area, reaching 15.322%±4.483% or 10.839%-19.805% burials with animal bones. Other 50% of the samples are represented by the steppe regions of Donetsk and Lugansk that reach 10.526%±3.827% or 6.699%-14.353% burials with animal bones. If the authors calculate percentages reports from the sample of the zone with 495 units, in this case we should find that the smallest numbers of burials with animal bones are situated in the region of Lugansk 1.010%±0.880% or 0.129%-1.891%. The second ranks the Donetsk region with 4.242%±1.775% or 2.466%-6.018% together with the Voronež region with 7.676%±2.345% or 5.331%-10.022%.

If we consider the average figures for each region we could find that in each zone the region differ significantly from each other: – in the Ural zone the Baškorstan region has just 2.29%±1.04% or 1.24%-3.33% and Samara 7.37%±1.82% or 5.55%-9.20%.

Therefore, due to the unification of the diverse data we could find that in the Don area, Voronež region, in the Volga zone, Baškorstan region

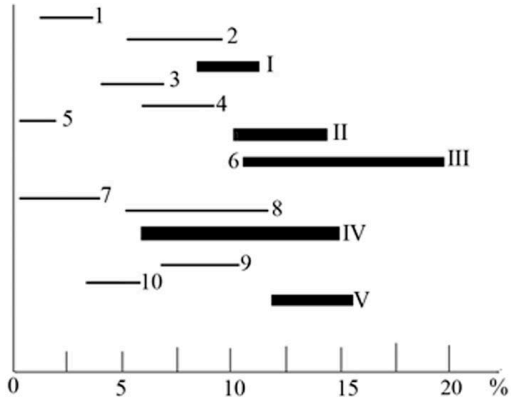

Fig. 37. Trusting intervals for different geographical regions.

Geographical regions: I – Ural regions: 1 – Baškorstan. 2 – Samara; II – Volga regions: 3 – Saratov. 4 – Volgograd. 5 – Astrahani; III – Don regions: 6 – Voronež; IV-Donbas regions: 7 – Lugansk. 8 – Donetsk; V – Lower Dniepr regions: 9 – Dnepropetrovsk. 10 – Zaporozh'e.

where existed burials with animal bones rendered as 15, 32±4.48% and 7.56±3.36% two main trends had existed. Burials with animal bones in a relatively great number in the basin of the Upper Don and with a small amount of them in Baškorstan. The silvo-steppe region of Volga has an intermediate place among them. The veridicity intervals of Volga, Baškorstan and of the Don region are cross-cut. By the way, the Volga zone is located on the territory between Baškorstan and the Don region.

In the of the semi-desert and steppe zone of Volga we could notice two distinct trends: 1 – the presence of a large number of burials with animal bones in the Saratov region 25.5±6.99%; 2 – the small number of this kind of monuments in the Volgograd region – 11.6±2.76%. Trusting intervals of

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the Lower Volga are represented by the Astrahan region that cross-cuts the up mentioned zones.

Now we will analyse the territory of the Ukraine, which is represented by four regions. The Lugansk region, which indeed is the zone of the distinct silvo-steppe zone, which entered into the steppe ones and has a small number of burials with animal bones – 6.33±5.37%. Another zone is the Dnepropetrovsk region encompassed from the north and east by the silvo-steppe that reaches 15.1±2.71% burials with animal bones. The Zaporozh'e and Donetsk regions which are situated in the steppe of the Azov Sea, southward from the Lugansk and Dnepropetrovsk regions also by territory and trusting intervals ranks and intermediate position – 11.24±2.79% (Zaporozh'e) and 12.5±5.0% (Donetsk).

However, the image that we could observe and the one given by the authors are very different from each other. It is necessary a more precise grouping of the data and then looking the explanation for the noticed trends.

Example no. 19

In this example we will focus our attention upon a researcher from the Ukraine who drew incorrect conclusions about the paleodemographic situation, by using percentage reports. As he had mentioned "*given the difficult situation determined by the anthropological data regarding the age and sex determination*" he was "constrained" to look for other ways for enhancing the information by "*establishing the age and sex of the deceased by other methods*"[35]. According to this researcher, we are about to make a significant find when the anthropology could be replaced by using other methods. We will see how the respective researcher had solved this situation.

By analysing the distinction by sex and age in the funerary ritual of the Delacău-Babino culture of the interfluves region of Dniepr and Don, R. Litvinenko had advanced some numerical and percentage indices. According to his data in that region 591 burials could be found.

For only 94 burials of 591 had been done the anthropological study, which resulted in 15.9%±2.94% or 12.95%-18.85%[36]. Considering that the percentage determined by the anthropologists in the uncertain category of burials is situated between 4.49%-13.46%, we are astonished to see how the researcher had managed to apply the easiest method – "*by analogy*"[37] – to determine as sure the sex of the deceased interred in other 497 burials and to begin the statistical calculations. Taking into account the percentage of the burials established as being uncertain by anthropologists, in this sample at least 44-45 burials should be considered in this category.

All burials with an eastern orientation and the skeleton laid on the right side in the opinion of the researcher had belonged to women (N=100). while those with a western orientation with the skeletons laid on their back and slightly bent to the left had belonged to the men (N=397). At last we could see that in the society constructed by the researcher the demographic picture looks as it follows: the male population (79.87% ±3.52% or 76.35%-83.40%.) is bigger compared to the one of the women (20.12%±3.52% or 16.59%-23.64%) of 3-3.5 times.

If we analysed the available anthropological material we could find that the percentage of the burials containing male individuals would be of 75.53%±8.69% or 66.84%-84.22%, while the women have accordingly 24.46%±8.69% or 15.77%-33.15%, meaning that the men were in larger number than women of 2-2.5 times.

R. Litvinenko considers that 468 burials would belong to the men, 123 to the women, among which he makes the distinction between those of the adults, adolescents and children. Characterising these groups, constructed by sex and age, he makes the separate calculation for the burials of men and women. Comparing the burials by the feature of "*existence of a mound mantle or filling of the grave*", R. Litvinenko mentioned that this is present for 89% (or N=320) of men graves (N=360) and for 66% (or N=81) of women graves (N=106). At the same time, the adolescent group of the male sex and those of the female sex have very similar percentages: 68.6% (or N=74) for boys (N=108) and 67% (or N=11) for girls (N= 17). The statistic average of the men graves in the Dniepr-

[35] Litvinenko 2007.

[36] In another place, R. Litvinenko writes that from the sample of 1149 skeletons the anthropologist have determined a number of 282 (25.4%), but from 100 male skeletons and 56 female ones, 8, respectively 6 were uncertainly assigned. Therefore, the percentage of the uncertain burials is of 8.97±4.48% or 4.489%-13.459%.

[37] Based upon the so-called discovery in the field or the Babino society organization, when the age and sex are being considered the ideas of Dubovskaya advanced in the 8th decade of the 20th century. She had assumed that in the early period besides the skeletons with western orientation, laid on their back and with a turn to the left side, must be included and the graves with the skeletons with east orientation, lying on their right side. Otroščenko has further developed this idea and assumed that they could be the women burials that represented a kind of antithesis to the male ones which had a western orientation and the skeletons were placed ont heir left side.

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Don region reaches 78% (N=320), while for women is 64% (N=79), but this figure is established based on the sample of the entire series of male individual graves (N=360) and female ones (N=123). Here it seems that the researcher had done a mistake. If the boys (n=108) are part of the entire group of the men (N=468) and the category of features "*existence of a mound mantle or filling of the grave*" have 74 graves, then, how could appear the figure of 329 for the adult men? It should have been 286, with the percentage of 79.44%±4.17% of the girls represented by 11 burials out of the 17 that belonged to all women, then how could appear figure 81 for the burials of the adult women? In fact, it had to be figure 68 with the corresponding percentage of 79.44%, 64.15% ±9.129%. or 55.02%-73.28%.

	Apud the data of R. Litvinenko				Authors' calculations		
		Quantity of graves		Empirical percentage	Margin of error	Trusting intervals	
		N	**n**	**P %**	**ΔP±**	**min**	**max**
1	Men	468	360	77.99145	3.753638	74.23782	81.74509
2	Boys	108	74	68.51852	8.759428	59.75909	77.27795
3	Adult men	360	**286** 320	**79.4444** 88.88889	**4.174469** 3.246439	**75.26998** 85.64245	**83.61891** 92.13533
6	Adult women	106	**68** 81	**64.15094** 76.41509	**9.129427** 8.081831	**55.02152** 68.33326	**73.28037** 84.49693
4	Women	123	79	64.22764	8.47107	55.75657	72.69871
5	Girls	17	11	64.70588	22.71719	41.98869	87.42307
		123	90	73.17	7.830268	65.34046	81.001
	Total	591	439	74.28088	3.523943	70.75694	77.80482

Fig. 38. Distribution of the burials belonging to the Babino culture in the region of Dniepr-Donets Severskyi considering "*the existence of a mound mantle or the filling of the burial*".

The compared samples are very unequal in quantity, fact which should raise suspicion about the percentages that do not reflect the real situation, as the calculated empirical percentages are not accompanied by the margin of error and the veridicity intervals (Fig. 38).

Out of table no. 38 constructed upon the data of R. Litvinenko we could see that the feature regarding "*the existence of a mound mantle or filling of the grave*" is not in 89% for men but in 77.97%±3.75% or 74.237%-81.74%. while the percentage of the female graves represent not 66% but 64.227% ±8.47% or 55.75%-72.698%.

Analysing the funerary settings, among which we could find the wooden frames and stone cists, the researcher doesn't bring the numerical data, saying that the grave with wooden frame represent 26% (N=122), being 22% (N=130) for the entire region, while for the adult individuals it reaches a percentage of 35% (N=126). The presence of the wooden fragments in women graves is a rare occurrence and represents 12.6% (cca N=15). The stone cists are not in large number (N=25) and reach 3.8%.

We will further try to examine the data of the "*mathematic calculation*" done by the author. As we already mentioned, he didn't gave us the number of the wooden frame graves, but when he discussed about the stone cists he mentioned their number and the percentage established for them. If 25 graves reached 3.8%, this means that the samples from where it started the calculation had numbered not 591 graves, but (25: 3.8) x100) =658.

If the culture of the mentioned region has the sample of 591 graves, out of which just 22%, or 130 burials have been done in wooden frame, for the adult male skeletons buried there (N=360), 35% or 126 burials had wooden frames. In this case, we have to settle one thing. How comes that from 130 burials with wooden frame 126 belong to male individuals, while the author insisted that instead of four burials with wooden frame (3.25%), there were 15 burials, or 12.6% from the women burials (N=123); in this case the percentage is different, as 15/123=12.19% not 12.6.

In the paper of R. Litvinenko the percentages are often incorrectly used. Thus, in tab. 3.20 the researcher has rendered the percentage reports for the Babino culture in the Dniepr and Pruth region in the absence of the numerical data, but those percentages are mistaken. Knowing some information about the samples based upon which the percentages had been established, we have tried to choose and examine some data, which are not

	P	±	min	max	n	Sample	Materials from the grave
Dniepr-Pruth	6.1	1.208	4.89	7.3	92	1508	Animal bones
Don-Dniepr	18.1	2.77	15.33	20.88	134	740	Animal bones
Dniepr-Pruth	26.4						Ceramic vessels
Don-Dniepr	19.0	2.42	16.57	21.43	191	1005	Ceramic vessels

Fig. 39. Comparison of the percentages reports for some indexes of the Babino culture in the Dniepr-Pruth and the Don-Dniepr regions.

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N=11	Orientation	n	P	±	min	max
	NW	1	9.09	16.98	0	26.07
	W	1	9.09	16.98	0	26.07
	SW	2	18.18	22.79	0	40.97
	N	0	0	0	0	0
	NE	2	18.18	22.79	0	40.97
	E	3	27.27	26.31	0.95	53.59
	SE	2	18.18	22.79	0	40.97
	S	0	0	0	0	0
	NW.W.SW	4	36.36	28.42	7.93	64.79
	NE.E.SE	7	63.63	28.42	35.20	92.06

Fig. 40. Orientation of the individual burials in the necropolis from Brăeşti (*apud* Dascălu, 2007).

rendered in the tables. The feature about "*the presence of animal bones in the graves*" for the Babino culture between the Dniepr and Pruth according to the author it reaches 6.1% with 92 units, fact which means that the researcher had used a sample of 1,508 units; 18.1% represent 134 units calculated on the sample of 740 units. The feature about "the presence of ceramic vessels in the graves" for the Babino culture in the region between the Don and Dniepr rivers reaches 19% that represent 191 units and had been established by using the sample of 1,005 units. We have created a table by using the data of the researcher, adding the margin of error and veridicity intervals for a better visual comparison of the data (Fig. 39).

Example no. 20

Now we will analyse few aspects from the paper of a Romanian archaeologist referring to the Bronze Age in the Moldova Plain[38]. The percentages had been widely used in this article. Sometimes they had been used for very small samples, where the percentage calculation without the margin of error is unjustified. Thus, in tab. 3f (p. 145) "*Orientation of the individual burials*" from Brăeşti[39] it is analysed a sample comprising just 11 units, parted into 8 groups and then in other 4. At first sight it could seem that the eastern orientation (63. 63%) is predominant in this necropolis, compared with others (the western one – 36.36%), but, after calculating the margin of error this difference became obvious (Fig. 40):

We could point out the same thing for tab. 3e where the sample comprised 13 units in tab. 3d with a sample of 26 units, in tab. 3b with a sample of 29 units, the same as in tab. 3c with a sample of 47 units.

In tab. 1 "Burials of the Noua culture" we have observed that percentage reports had not been accompanied by the unit number and also by the general sample upon which the empirical percentages had been calculated. We have tried to estab-

TRANSYLVANIA				MOLDOVA			
Orientation	**n**	**P**	**N=P/nx100**	**Orientation**	**n**	**P**	**N=P/nx100**
NW	7	5.93	85	NW	7	5.93	85
W	0	0		W			
SW	18	15.25	85	SW			
N	3	3.39	113	N			
NE				NE	30	26.27	88
E	2	1.70	85	E			
SE	9	7.63	85	SE	2	1.78	89
S	11	10.17	92	S			
	50				39		

Fig. 41. Distribution of the burials belonging to the Noua culture from Transylvania and Moldova (*apud* Dascălu).

TRANSYLVANIA				MOLDOVA			
Orientation	**n**	**P**	**N=P/nx100**	**Orientation**	**n**	**P**	**N=P/nx100**
NW	7	5.93	85	NW	7	5.93	85
W	0	0		W			
SW	18	15.25	85	SW			
N	3	3.39	113	N			
NE				NE	30	26.27	88
E	2	1.70	85	E			
SE	9	7.63	85	SE	2	1.78	89
S	11	10.17	92	S			
	50				39		

Fig. 42. Distribution of the burials belonging to the Noua culture from Transylvania and Moldova (*apud* Dascălu).

[38] Dascălu 2007.

[39] Dascălu 2007, 143-145.

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lish the sample of the burials from Transylvania[40]. In four cases it comprised 85 units, while in other two cases it comprised 113 and 92 units and for the burials from Moldova there were 85, 88 and 89 units (Fig. 41), even if the total sum of all burials equals 89 units.

From the study of figure 40 we could observe that in Transylvania prevailed the southern orientation (S, SV, SE)- 42. 69% ±10.27% or 32. 42%-52. 97%, while in Moldova the northern one (N, NV, NE) – 41. 57% ±10. 23% or 31. 33%-51. 81% (Fig. 42).

Regarding the typical orientation of the Noua culture burials the author had written in the conclusion that for Truşeşti this is NW, while for Crasnoleuca it is NE and SE. The data about the necropolis from Truşeşti rendered in tab. 3a (p. 143) we could find that 57 burials of 76 had a NW orientation 75, 0%±9.73% or 65. 26%-84.73%. But, as concerns the Crasnoleuca necropolis presented in tab. 3b (p. 143) none of 29 burials had a NE orientation, while to SE just eight burials had existed – 27.58%±16, 26% or 11.31%-43.85%. From the same table we could find that seven burials had been orientated to NV and the same number to S -24.13%±15.57% or 8.56%-39.71%.

***

The examples we have given above could be even more numerous, without any problem, but the main conclusion, which has to be perceived is the fact that the method of the percentage reports is a good instrument for the researchers. This method, with veridicity intervals had been successfully applied by us in the study of the burials belonging to the Bronze Age in the North-Pontic steppe of the Eastern Ukraine. This is how we could point out two cultural – chronological groups among the known archaeological materials, one of the groups being interpreted as part of the Delacău-Babino culture (the Mnogovalikovaya culture or Babino culture). Then, by using the same method, we have determined specific cultural and chronological groups of the Middle and Late Bronze Age[41].

The same method had been also used by Liubov Geraskova in the study of the monumental sculptures of the medieval nomadic populations of the European and Asian steppe[42].

The method of percentage reports with veridicity intervals need its correct use, namely the calculation of the empirical percentages (P) that should be accompanied by the establishing of the margin of error (∆P) or by veridicity intervals. Such a percentage registrations looks similar to the ^{14}C dating, where the figures at the beginning mean the empirical percentage (P) followed by the signs ± and another figure which mean ∆P or the veridicity interval.

By the way, all the researchers mentioned in our article, when using the ^{14}C dating for the burial types, have used the data with the possible mistake (Examples: 3,890±150 BC or 3,830±120 BC etc.).

Paleoanthropologists, when describing the dimensions of the investigated skeletal materials, added to the average value the minimal and maximal ones[43]. For instance, the skull of men had an average longitudinal diameter of 196 mm (min-max: 187-205 mm). In a similar manner things were presented by the researchers in paleozoology. When studying animal species and comparing different indices of bone dimensions, they also brought the possible variations. For example, the alveolary length R2-R4 of the maxillary is 139.00 ±3.67 mm; the entire length of the atlant is 9.38±2.26 cm etc.). Still, when they analyze the structure of the heard by species or burials, the researchers do not use this procedure anymore.

This is the reason why we consider that in the publication of the osteological or paleozoological studies should be kept the following rules:

The empirical percentages (P) established by the researchers should be accompanied by all means by the total number (n) of the bones (NR) and of the individuals (NMI) upon which the percentages were calculated.

For establishing the percentages (P) they should also calculate ∆P (the possible mistake, or margin of error. Examples: 20.12%±3.52% or 16.59%-23. 64%; 24. 13%±15.57% or 8.56%-39.71%, etc.).

Just after the comparative analysis of the percentage reports with the margin of error and veridicity intervals we could draw the conclusions about the studies of the given osteological materials.

The archaeologists, in their studies, when using the percentages reports, should follow the same procedure: 1 – any established percentage should be accompanied by the information about the quantity of the materials used for the rendered cal-

[40] Dascălu 2007, 141.

[41] Pislaryi, Pozhidaev 1982, 178-187.

[42] Geraskova 1990, 19-28.

[43] Zinevič 1967.

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culations. 2 – If the researchers drew any conclusions based upon the percentages and percentage reports, they should bring argument for it, adding the margin of error and veridicity intervals. Thus, the scientists cold avoid drawing mistaken conclusions, and their opinions would become more true and documented.

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VARIA DACO-ROMANA (XXI-XXIV)

CONSTANTIN C. PETOLESCU

Mots-clés: drachme, tétradrachme, statère; Décénée, ΚΟΣΩΝ, ΚΟΣΩΝ ΔΡΟΥΕΙC; Strabon, Ptolémée; *Ad Mutrium, Ad Pannonios, Ad Vatabos (Batavos), Cogaionon, Ruconium, Ulpianum, Usdicenses.*

Résumés :

21. A propos du roi Coson

Le mystère des monnaies du type ΚΟΣΩΝ a été renouvelé par la réapparition dans le commerce d'antiquités de quelques monnaies en argent, avec cette légende même, mais considérées d'habitude comme des faux modernes. Une véritable surprise fut tout récemment l'apparition de plusieurs pièces en argent imitées d'après les monnaies de Macedonia Prima, présentant sur le droit la massue d'Héraclès encadrée, au lieu de la légende ΜΑΚΕΔΟΝΩΝ ΠΡΩΤΗΣ, par l'inscription ΚΟΣΩΝ / ΔΡΟΥΕΙΣ. Nous comprenons « Coson, fils de Droueis » ; le nom du père (sans doute, au génitif) du dynaste dace trouve analogie dans l'inscription gravée sur une bague en or connue de l'inventaire d'un tombeau de Sucidava, exploré en 1854 et datant du II^e^ s. p. C. (voir IDR, II, 228, avec la bibliographie antérieure): à l'extérieur ΒΡΩΛΘΡΙΣ, à l'intérieur ΒΕΙΝ ΔΡΥΗCΟΥ ΑΡΟΥΛΟΝ.

22. Cogaionon

À ce propos, Strabon (Géogr., VII, 3, 7) consigne : καὶ τὸ ὄρος ὑπελήφθε ἱερόν, καὶ προσαγορεύουσιν οὕτος· ὄνομα δ' αὐτῷ Κωγαίονον, ὁμώνυμον τῷ παραρρέοντι ποταμῷ, « la montagne même était considérée sainte; on l'appelle donc Cogaionon, du même nom que le fleuve qui coule (près de cette montagne) ». Ce toponyme a été mis en liaison par S. Olteanu et D. Sluşanschi (voir plus bas, notes 13 et 15) avec le mot ΚΑΓΑ mentionné dans deux inscriptions grecques de Tomis (voir ISM, II, 36 : Καγα Ἡρωί[δου] et 128 : Ἥρωι Καγα, selon nous une nouvelle épithète du Cavalier Thrace). D'autre part, la forme Κωγαίονον désignait de plus la grotte-sanctuaire où se retirait le grand prêtre Zamolxis (cf. l'application de la désinence **–** ον au nom d'une divinité, pour dénommer son sanctuaire: Ἀθήναιον, Ἥραιον, Ἡρῷον, Ἰσεῖον, Μιθραῖον, Μουσεῖον, Νυμφαῖον, Σαραπεῖον).

23. Ruconium ou Ulpianum ?

Une inscription fragmentaire, provenant de Jebucu (comm. Almaşu, dép. de Sălaj voir note 21) et datant des années 198-209, est dédiée à Jupiter Optimus Maximus par le *vicani vici [- - - -]ni* ; les éditeurs intègrent *[Ruco]ni,* toponyme attesté par Ptolémée (IV, 8, 4 : Ῥουκκόνιον). Nous préférons *[Ulpia]ni,* attesté lui-aussi par Ptolémée (*ibidem :* Οὐλπιανόν).

24. Civitas Ausdecensium

Une inscription trouvée au sud de Dobroudja (Scythia Minor), près de Tropaeum, fait mention d'une *Civitas Ausdecensium* (CIL, III, 144372 = AÉ, 1957, 333; IDRE, II, 338.), cité pérégrine.
Ce toponyme a été associé avec la tribu thrace des *Usdicenses* (mentionnée par Ptolémée, III, 11, 8: habitants de la stratégie d'Οὐδυκησική) et par une inscription de Rome (CIL, VI, 2807 = 32582; ILS, 4068 CIL, VI, 2807 = 32582; ILS, 4068; *cives Usdicenses vico Agatapara*).
La forme du toponyme *Ausdecenses* provient de la manière dont cette population colonisée au sud de Dobroudja (à côté des *Bessi* et des *Lai*) était dénommée par les autorités romaines et par la population indigène : *Ad Usdicenses* (« Chez les *Usdicenses* ») ; voir pour analogie, en Dacie : *Ad Pannonios, Ad Vatabos / Ad Batavos,* éventuellement *Ad Tungros*.
Par le même phénomène linguistique pourrait s'expliquer l'évolution du toponyme Orgame (Ὀργάμη : Hécatée) : *Ad + Orgame → Argamum*.

Thraco-Dacica S. N., Tomul IV-V (XXVII-XXVIII), 2012-2013, 211-216.

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Cuvinte cheie*:* drahmă, tetradrahmă, stater; Ptolemeu, Strabo; ΚΟΣΩΝ, ΚΟΣΩΝ – ΔΡΟΥΕΙC, Deckaineos; Kogaionon; Ad Pannonios, Ad Mutrium, Ad Vatabos (Ad Batavos); Altinum, Argamum, Civitas Ausdecensium, Ruconium, Sucidava, Ulpianum, *Usdicenses*.

Rezumate:

21. Recent, enigmaticul rege KOSWN a apărut şi pe monede de argint imitate după tetradrahmele Macedoniei Prima: pe revers este redată o măciucă (simbolul lui Heracles), iar de-a lungul acesteia, de o parte şi de alta, KOSWN / DROUEIC, prin urmare „Coson, (fiul lui) Droueis". Patronimicul este recunoscut de autor într-o inscripţie de la Sucidava (IDR, II, IDR, II, 228).

22. Muntele sfânt al dacilor este denumit Kwgaivonon de Strabo (*Geogr.* VII, 3, 7). Pe baza a două inscripţii din Dobrogea (ISM, II, 36 şi 128), în care Eroul Cavaler poartă epitetul ΚΑΓΑ, autorul (de acord cu alţi învăţaţi: D. Sluşanschi, A. Vulpe) consideră că forma autentică era Kagaion; substantivul Κωγαίονον desemnează deopotrivă muntele şi peştera-sanctuar (după exemplul aplicării desinenţei –ον numelor unor divinităţi, pentru a desemna sanctuarele lor: Ἀθήναιον, Ἥραιον, Ἡρῷον, Ἰσεῖον, Μιθραῖον, Μουσεῖον, Νυμφαῖον, Σαραπεῖον).

23. O inscripţie recent descoperită la Jebucu (com. Almaş, jud. Sălaj) menţionează nişte *vicani vici [Ruco ?]ni* (v. *infra,* nota 21); completarea propusă de editori se întemeiază pe menţionarea toponimului *Ruconium* în *Îmdreptarul geografic* al lui Ptolemeu (IV, 8, 4) – care însă era situat la vest de Porolissum, în teritoriul rămas *extra fines provinciae*. Noi preferăm întregirea *vicani vici [Ulpia]ni*; toponimul *Ulpianum* este şi el atestat de Ptolemeu, alături (în apropiere) de Napoca şi Potaissa.

24. *Civitas Ausdecensium.* Autorul explică forma *Ausdecenses* prin combinaţia dintre prepoziţia *ad* + *Usdicenses,* numele unei seminţii trace, menţionată de Ptolemeu (III, 11, 8) şi epigrafic (CIL, VI, 2807 = 32582 = ILS, 4068), însemnând „La Usdicensi"; prin contragere, a rezultat *Ausdecenses.* Într-un mod asemănător se pot explica alte toponime din Dobrogea romană: *Ad* + *Oltina* =*Altinam*→ *Altinum* şi *Ad* + *Orgame* = *Argamem* → *Argamum.*

După o întrerupere îndelungată[1], reluăm seria acestor note privitoare la istoria Daciei[2].

21. Despre regele *Coson*

Într-o carte apărută cu doi ani în urmă consacrată monedelor de aur (stateri) de tip ΚΟΣΩΝ, se menționează – din surse considerate nu tocmai sigure – apariția în comerțul de antichități a unor piese de argint cu numele acestui misterios basileu[3]; de fapt, știrea nu era nicidecum nouă, astfel de piese fiind cunoscute cu cel puțin un veac în urmă[4]. Concluzia autoarei era că aceste piese de argint aveau valoare de drahmă[5].

Când cartea vedea lumina tiparului, era deja de notorietate descoperirea unor „cosoni" de argint. Surpriza a fost descoperirea unor piese imitate după monedele Macedoniei Prima, având pe revers o măciucă (simbolul lui Heracles), iar de-a lungul ei, de o parte și de alta, inscripția ΚΟΣΩΝ / ΔΡΟΥΕΙΣ[6]. După modelul monedelor grecești, este evident că cel de-al doilea nume era un patronim, cel al tatălui lui Coson; acesta trebuie să fie la genitiv: Δρουεισ(ου). Acest antroponim traco-geto-dacic găsește analogie în inscripția de pe un inel de aur descoperit într-un mormânt la Sucidava[7]: pe interiorul inelului se citesc literele ΒΡΩΛΘΡΙΣ, pe exterior ΒΕΙΝ ΔΡΥΗCΟΥ ΑΡΟΥΛΟΝ (ceea ce ar însemna: „Al lui Brolythribis, fiul lui Dryesos, născut la Aroulon").

Cum s-a observat în cartea citată, Coson, fiul lui Droueisos, era comandantul *(dux)* formațiunii din munți, care se pregătea să trimită ajutor militar lui Brutus; el nu era încă rege, așteptând probabil să primească confirmarea din partea romanilor[8].

[1] Ultima apariție (seriile XIX-XX), în Thraco-Dacica 19, 1998, 157-160.

[2] O parte din aceste note, precum şi altele apărute în diverse publicații, au fost strânse într-un volum: vezi Petolescu 2007.

[3] Petolescu 2011, 11, nota 5.

[4] Bahrfeldt 1912, 252, despre care afirma: "Alle solche Stücke in Silber sind jedoch moderne Abgüsse goldener Originale und somit Fälschungen" (vezi și sursa lui M. v. Bahrfeldt).

[5] Petolescu 2011, 11 (cu nota 4), 74 (nota 58).

[6] Vezi astfel Casa de licitație Gemini, LLC, IX, 8 ianuarie 2012, nr. 81.

[7] IDR, II, 228 (= CIGD, 122, cu bibliografia anterioară). Inelul, împreună cu alte obiecte, a apărut în mormântul unei femei, descoperit în 1854 de D. Papazoglu; mormântul datează pe baza unei monede de bronz din anii 159-160, determinată de Carmen Maria Petolescu 1979, 39-40.

[8] Petolescu 2011, 73, cu nota 53.

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22. Cogaionon

Cele mai interesante date asupra religiei geţilor[9], cu referire la epoca lui Burebista, ne-au fost transmise de geograful Strabo; vorbind depre muntele şi peştera unde se retrăgea marele preot, Strabo consemnează (VII, 3, 5):

*„Se spune că un get cu numele Zamolxis ar fi fost sclavul lui Pitagora şi ar fi deprins de la acesta unele cunoştinţe astronomice, iar o altă parte ar fi deprins-o de la egipteni, căci cutreierările sale l-ar fi dus până acolo. Întorcându-se la el în ţară, s-ar fi bucurat de o mare trecere la conducători şi la popor – întrucât, întemeiat pe semnele cereşti, el făcea prorociri. În cele din urmă l-a convins pe rege să fie părtaş la domnie, spunându-i că este în stare să-i vestească voinţa zeilor. Mai întâi s-ar fi făcut preot (*ιερεύς*) al zeului cel mai slăvit la ei, iar imediat după aceea a primit şi numele de zeu (*θεός*), petrecându-şi viaţa într-o peşteră, pe care a ocupat-o el şi unde ceilalţi nu puteau intra. Se întâlnea rar cu cei din afară, cu excepţia regelui şi a slujitorilor acestuia. Regele lucra în înţelegere cu el, fiindcă vedea că oamenii ajunseseră mult mai ascultători decât înainte. Căci supuşii lui credeau că dă poruncile sfătuit de zei. Obiceiul acesta a continuat până în zilele noastre, pentru că mereu se găsea cineva gata să-l sfătuiască pe rege – şi acelui om geţii îi spuneau zeu. Muntele a fost socotit sfânt şi s-a numit aşa. I se zicea Cogaionon (*Κογαίονον*) şi la fel a fost şi numele râului care curgea pe lângă el* (καὶ τὸ ὄρος ὑπελήφθε ἱερόν, καὶ προσαγορεύουσιν οὕτος ὄνομα δ’ αὐτῷ Κωγαίονον, ὁμώνυμον τῷ παραρρέοντι ποταμῷ)*. Pe când domnea asupra geţilor Burebista – împotriva cărora s-a pregătit să pornească divinul Caesar –, cinstirea mai sus amintită o avea Deceneu (*Δεκαίνεος*). A dăinuit la geţi obiceiul pitagoreic, adus de Zamolxis, de a nu se atinge de carnea animalelor”*[10].

Numele marelui preot mai este consemnat de istoricul roman târziu Iordanes (*Getica,* 39, 69, 71, 73); este un antroponim autentic, deoarece este atestat epigrafic în onomastica geto-dacă din epoca imperială romană[11].

Cu aproape un sfert de veac în urmă, numele muntelui sfânt al geţilor a fost pus în legătură cu o inscripţie bilinguă de la Poarta Albă (jud. Constanţa)[12]: în partea latină, în r. 1, dedicaţia s-ar citi *Heroi sacrum*; în partea greacă, r. 4 Ἡ<ε>ρωι ΚΑΤΑ. O reexaminare a inscripţiei a arătat însă că literele obscure de la începutul variantei greceşti sunt ΚΑΓΑ[13]; noua lectură este întărită de o altă inscripţie tomitană, unde apare dedicaţia ΚΑΓΑ Ἡρωί[δου][14].

Graţie „ecuaţiei” din inscripţia bilinguă citată, s-a considerat καγα un echivalent tracic al lui *sacrum*; mai mult, a fost legat de tema Κογα- din numele muntelui sfânt al geţilor[15]. Noi ne-am manifestat însă de la început dezacordul faţă de asemenea abordare a problemei. Mai întâi, deoarece cuvântul *sacrum* nu se mai vede pe piatră; probabil nu se vedea bine nici în 1896, anul publicării inscripţiei[16]. Apoi, prezenţa unui cuvânt barbar (tracic) într-un text grecesc este neobişnuită. După părerea noastră, în amândouă inscripţiile este vorba despre un epitet, până acum neluat în seamă, al *Eroului.* Totuşi, o legătură cu toponimul getic citat este posibilă.

De fapt, sensul acelui toponim este explicat chiar de Strabo: „Muntele a fost socotit sfânt ***şi s-a numit aşa*** (καὶ τὸ ὄρος ὑπελήφθε ἱερόν, καὶ προσαγορεύουσιν οὕτος). I se zicea Cogaionon … (ὄνομα δ’ αὐτῷ Κωγαίονον)”. Prin urmare, echivalentul trac al adjectivului grecesc (neutru) ἱερόν era κωγαιόν; prin extensiune, substantivul Κωγαίονον desemnează deopotrivă muntele şi peştera-sanctuar (după exemplul aplicării desinenţei –ον numelor unor divinităţi, pentru a desemna sanctuarele lor: Ἀθήναιον, Ἥραιον, Ἡρῶον, Ἰσεῖον, Μιθραῖον, Μουσεῖον, Νυμφαῖον, Σαραπεῖον).

Înseamnă că, în cele două inscripţii tomitane, epitetul Eroului se traduce prin „sfânt”; acest adjectiv se numără, de altfel, printre epitetele Erou-

[9] Vezi în această privinţă (cu citarea unei ample bibliografii): Russu 1944-1948, 61-139; Crişan, 1986; Sanie, 1995; Petre 2000; Vulpe 2012, 443-455.

[10] Vezi spre comparaţie iarăşi la Strabo, VII, 3, 3: „Poseidonios afirmă că misii (Μυσοί) se feresc, din cucernicie (κατ’ εὐσέβειαν), de a mânca vietăţi; iată deci motivul pentru care nu se ating de carnea turmelor lor”.

[11] Despre acest personaj: Vulpe 1976, 62-68. Numele este autentic; mai apare într-o inscripţie de la Rapidum (Mauretania Caesariensis; AÉ, 1951, 144: *Decineus*; vezi IDRE, I, 166, în comentariu); pe un *ostracon* din deşertul oriental al Egiptului (Cuvigny 2005, nr. 98: Δεκαινας); precum şi în două diplome militare – din anii 151 (RGZM, 31) şi 161/168 (*apud* Dana, Matei-Popescu 2009, 215 sq., nr. 22 şi 30).

[12] Tocilescu 1896, 93, nr. 36; preluată în: CIL, III, 14214, 27; ILS, 4066; ISM, II, 128.

[13] Olteanu 1989, 215-217.

[14] ISM, II, 36. S-ar putea ca epitetul Eroului să fi fost reprodus în grafie latină, cumva: CAGAEO (?), fiind citit de Tocilescu *sacrum* (litera *C*, rotundă, fiind confundată cu jumătatea superioară a lui *S,* iar *G* uşor de confundat cu *C*).

[15] Olteanu 1989; ideea a fost dezvoltată, printr-o savantă „analiză filologică şi lingvistică”, de D. Sluşanschi, *ibidem,* 219-224. Propunerea a fost acceptată şi de Alexandru Vulpe 2010, 449.

[16] Tocilescu 1896, 93: „Die Oberflche des Steines ist sehr abgerieben…”.

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lui cavaler[17]. Diferenţa faţă de forma transmisă de Strabo s-ar putea explica astfel: forma din inscripţie este greşită (puţin probabil, deoarece este atestată de două ori); cuvântul a suferit o evoluţie lingvistică, de la ΚΩΓΑ la ΚΑΓΑ[18]; mai probabil poate fi o greşală, de copiere sau chiar de percepţie a lui Strabo. Prin urmare, este posibil ca numele muntelui sfânt (al sanctuarului ?) să fi fost Καγαίονον[19], iar al râului ce curgea la poalele lui Καγαίονος[20].

23. Rucconium sau Ulpianum?

De curând a fost publicat un altar de calcar aflat acum în zidul bisericii reformate din Jebucu (com. Almaș, jud. Sălaj); dimensiuni (cele maxime) 0,72 × 0,45 × 0,72 cm, câmpul epigrafic 49 × 62 cm. Partea stângă a inscripției este deteriorată; textul este astfel reconstituit de editori[21]:

[I*(ovi)*] O*(ptimo)* M*(aximo)*
[*et Genī*]o DD⟦D⟧NN⟦N⟧SEV*(eri)*
[*et Ant(onini)*] AVGG ET GETAE C*(aesaris)*
[*c(ives) R(omani) et*] VICA NI VICI
5 [*Ruco*]NI IMP COM
[*devoti*] SACRVM POS

Formularul din r. 2-3 arată că inscripția datează din timpul domniei împăratului Septimiu Sever și a fiilor săi, între anii 198-209. Conform întregirii editorilor, dedicanții sunt *[c(ives) R(omani et] vicani vici [Rucco]ni imp(endio) com(mune) [devoti]*; ar fi vorba de un nou toponim identificat pe harta Daciei. Acesta apare în *Îndreptarul geografic* al lui Ptolemeu (IV, 8, 4), împreună cu altele din nordul Daciei: Ῥουκκόνιον, Δοκίδαυα, Πορόλισσον, Αρκοβάδαρα, Τρίφουλον, Πατρίδαυα, Καρσίδαυα, Πετρόδαυα; dintre acestea, pot fi identificate sigur doar *Porolissum* (Moigrad) și *Arcobadara* (aproape de castrul de la Ilișua)[22]. Primele două toponime menționate de Ptolemeu se aflau la vest de Porolissum, prin urmare *extra fines provinciae*; probabil se aflau pe un drum care ducea spre Porolissum, apoi la Arcobadara și prin nordul Transilvaniei trecea munții în Moldova.

Locul descoperirii inscripției era la aproximativ jumătatea distanței dintre Porolissum și Napoca; Ptolemeu menționează în continuarea celor de mai sus, evident de la nord spre sud, următoarele toponime: Οὐλπιανόν, Νάπουκα, Πατρούισσα (evident, Potaissa), Σαλῖναι. Totuși, *Ulpianum* nu apare în *Tabula Peutingeriana*; înseamnă că acest *vicus* nu se afla pe drumul imperial care, de la Napoca la Porolissum, trecea prin *Optatiana*, *Largiana* și *Certiae*.

După ordinea în care este menţionat de geograful Ptolemeu, toponimul *Ulpianum* trebuie localizat în Dacia Porolissensis[23], undeva la vest de drumul Potaissa – Napoca – Porolissum. Este puţin probabil să fie vorba de o fundaţie a împăratului Traian, care ar fi rămas un obscur *vicus*; este posibil ca numele să provină de la cel al unei trupe (vezi *supra* toponimele *Ad Batavos* şi *Ad Pannonios*), în cazul de faţă de la supranumele imperial cu care au fost distinse cohortele *I Brittonum milliaria Ulpia torquata p(ia) f(idelis) civium Romanorum* şi *I Flavia Ulpia Hispanorum milliaria civium Romanorum equitata*[24] – ai căror viteji *Ulpiani,* lăsaţi la vatră şi împroprietăriţi, vor fi dat numele aşezării lor, poate cea de la Jebucu: *vicani vici [Ulpia]ni.*

24. Civitas Ausdecensium

Acest toponim este atestat de o inscripție pe o piatră de hotar descoperită în Ddobrogea, la Cetate, în apropiere de orașul Tropaeum: *t(ermini) pos(iti) c(ivitatis) Ausdec(ensium) adver(sus) Dac(os)*[25].

În privința acestui toponim, G. G. Mateescu trimitea la tribul trac *Usdicenses,* atestat de Ptolemeu (*Geogr.,* III, 11, 8) și la o inscripție de la Roma menționând niște *cives Usdicenses vico Agatapa-*

[17] Vezi *Corpus Cultus Equitis Thracii*, II, 1, p. 171 (indici); II, 2, 136 (indici); IV, 1, 122 (indici).

[18] A se compara eventual cu trecerea de la *Orgame* la *Argamum* şi de la *Ordessos* la *Argesis*.

[19] Vezi Vulpe 2010, 449: «Prin urmare termenul Κωγαίονον, care ar trebui corectat în Καγαίονον, înseamnă de fapt „muntele sacru / sfânt", perfect compatibil cu ὄρος ἱερόν din contextul lui Strabon».

[20] Vezi Strabo, VII, 3, 5: „Muntele a fost socotit sfânt şi s-a numit aşa. I se zicea Cogaionon (Κογαίονον) şi la fel a fost şi numele râului care curgea pe lângă el". Localizarea pe teren a *Muntelui Sfânt* al dacilor este necunoscută; nu poate fi vorba de *terasa sanctuarelor* de la Sarmizegetusa (etimologia acestui toponim ar fi, după I. I. Russu, „cetate de palisadă pe stâncă, înălțime"; IDR, III/2, 24). Cât privește numele râului care curgea pe lângă cetate, acesta trebuie să fi fost totuși *Sargetia,* cu toată opoziția din partea unor filologi și istorici (prima silabă din numele cetății, *Sar-,* se regăsește în numele legendarului râu).

[21] Ardevan, Zăgrean 2012, 73-84.

[22] Localizarea acestui toponim s-a făcut pe baza unei inscripții descoperite la Ilișua, de mai multe ori reluată (AÉ, 2006, 1130 = 2007, 1190). În cronica epigrafică pe anul 2009, nr. 1373, noi am exprimat părerea că așezarea rurală dezvoltată pe lângă castrul alei Tungrorum Frontoniana trebuie să se fi numit *Tongri* (vezi Geogr. Rav. 4, 5: *Congri*!) sau *Ad Tungros*; dar *Arcobadara* era alt toponim, centrul unui *territorium* învecinat cu castrul tungrilor (vezi acum într-o altă descoperire epigrafică externă, un *territorium Bassiana*: Petolescu 2012, 137-140). Vezi *infra,* nota 29.

[23] Vezi Gostar 1969, 2, 171-176.

[24] Despre aceste trupe: Petolescu 2002, 87-88 şi 111-112.

[25] CIL, III, 144372 (= AÉ, 1957, 333; IDRE, II, 338).

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ra [26]. Se crede că această populație tracică a fost transferată în cursul secolului I a. Chr. în zona Dobrogei, împreună cu alte poplații tracice (*Bessi* și *Lai*)[27].

La data hotărniciei, *civitas Ausdecensium* era o *civitas peregrina*. Forma în care a evoluat numele acestei semințiise datorează felului în care așezarea lor era denumită de vecini: *Ad Usdicenses,* „La Usdicensi", precum în Dacia: *Ad Pannonios* (Tabula Peut.; Geogr. Rav, IV, 14), *Ad Vatabos (Ad Batavos)*[28], eventual și *Ad Tungros*[29]. Prin contragere, s-a ajuns la forma *Ausdecenses,* de unde *Civitas Ausdecensium.*

[26] CIL, VI, 2807 (= 32582; ILS, 4068).

[27] Doruțiu-Boilă 1976, 73-74.

[28] IDRE, II, 411 (= AÉ, 1993, 1577).

[29] Într-o revenire recentă, Dana şi Nemeti 2012, 431-437, consideră ipoteza noastră „très discutable"; dar inscripția, închinată *[Geni]o terri[tor(ii) A]rcoba[- - -],* arată că toponimul desemnează o comunitate civilă, cu *magistri* săi, deci total diferită de teritoriul castrului (a cărui existență era vitală pentru trupa de cavalerie din castru).

Probabil în același fel au evoluat și numele altor așezări din Dobrogea: astfel, așezarea de pe malul lacului Oltina (aceasta trebuie să fi fost forma tracică a numelui lacului), *Ad Oltinam,* a devenit *Altinum* (Not. Dign., Or., XL, 28: *milites nauclarii Altinenses, Altino*; Procopius, *De aedificiis,* IV, 7, 9. τὸ Ἀλτηνῶν); la fel trebuie să se fi întâmplat cu *Orgame* (menționată astfel de Hecateu din Milet; acesta a fost posibil numele lacului, unde s-a întemeiat așezarea de la Capul Dolojman), care în epoca romană era poate denumită *Ad Orgame,* de unde a derivat *Argamum* (cum apare în hotărnicia consularului Laberius Maximus[30]; în secolul al VI-lea la Procopius, *De aedificiis,* IV, 11, 20: Ἀργαμώ și Ἐργαμία). Vezi spre comparație și numele așezării aflată *ad Mutrium* („pe Motru"), în Oltenia, care apare la Ptolemeu (III, 8, 4) Ἀμούτριον, iar în Tabula Peutingeriana (VII, 4) *Amutria*.

[30] ISM, I, 68.

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REVIEW

DANIEL SPÂNU, *Tezaurele dacice. Creația în metale prețioase din Dacia preromană*

București, ed. Simetria, 2012, ISBN 978-973-1872-28-5;
473 de pagini, din care 195 de planşe; 78 de figuri în text – hărţi de răspândire, grafice, tabele, scheme de principiu, etc.; coperte cartonate

VLAD V. ZIRRA

Fig. 1. Coperta unu și pagină de gardă a volumului prezentat.

Mărturisesc încă de la început că mă simt onorat să scriu câteva cuvinte despre cartea recent apărută a colegului nostru. Pentru a anticipa concluziile – o carte bună e ca o mâncare bună, – merită gustată de mai multe ori – dar este mai mult decât atât pentru că poate deschide şi influenţa cercetarea. Dacă a gusta mai des o mâncare bună poate conduce spre o ponderalitate nedorită, citirea (cu atât mai bine dacă este repetată) unei cărţi bune oferă cititorului şanse semnificative pentru a deveni mai ştiutor şi pregătit în înţelegerea unei lumi mai vechi.

Conţinutul lucrării

1. Cuvânt înainte;
2. Capitolul I – Introducere;

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3. Capitolul II – Istoricul cercetării;
4. Capitolul III – Starea şi pertinenţa informaţiei;
5. Capitolul IV – Contextele arheologice: aşezări morminte, tezaure;
6. Capitolul V – Morfologia orfevreriei dacice;
7. Capitolul VI – Originea metalelor preţioase;
8. Capitolul VII – Tehnici de execuţie şi de ornamentare;
9. Capitolul VIII – Consideraţii asupra ornamenticii orfevreriei dacice;
10. Capitolul IX – Tratamentul aplicat pieselor de orfevrerie în vechime;
11. Capitolul X – Iconografie şi mitologie în orfevreria dacică;
12. Capitolul XI – Analiza inventarelor. Conţinut şi semnificaţie;
13. Capitolul XII – Cronologie relativă şi absolută;
14. Capitolul XIII – Chorologia orfevreriei dacice;
15. Capitolul XIV – Orfevreria dacică, o formă originală de reprezentare culturală;
16. Concluzii; Excurs – Contribuţii la studierea brăţărilor de aur de la Grădiştea de Munte;
17. Summary – The Dacian Hoards. Precious metalwork in Pre-Roman Dacia;
18. Zusammenfassung – Die dakischen Schatzfunde. Die Goldschmiedekunst aus der Vorrömischen Dakien;
19. Anexe – Catalogul descoperirilor. Concordanţa figuri-pagini. Lista planşelor cu indicarea

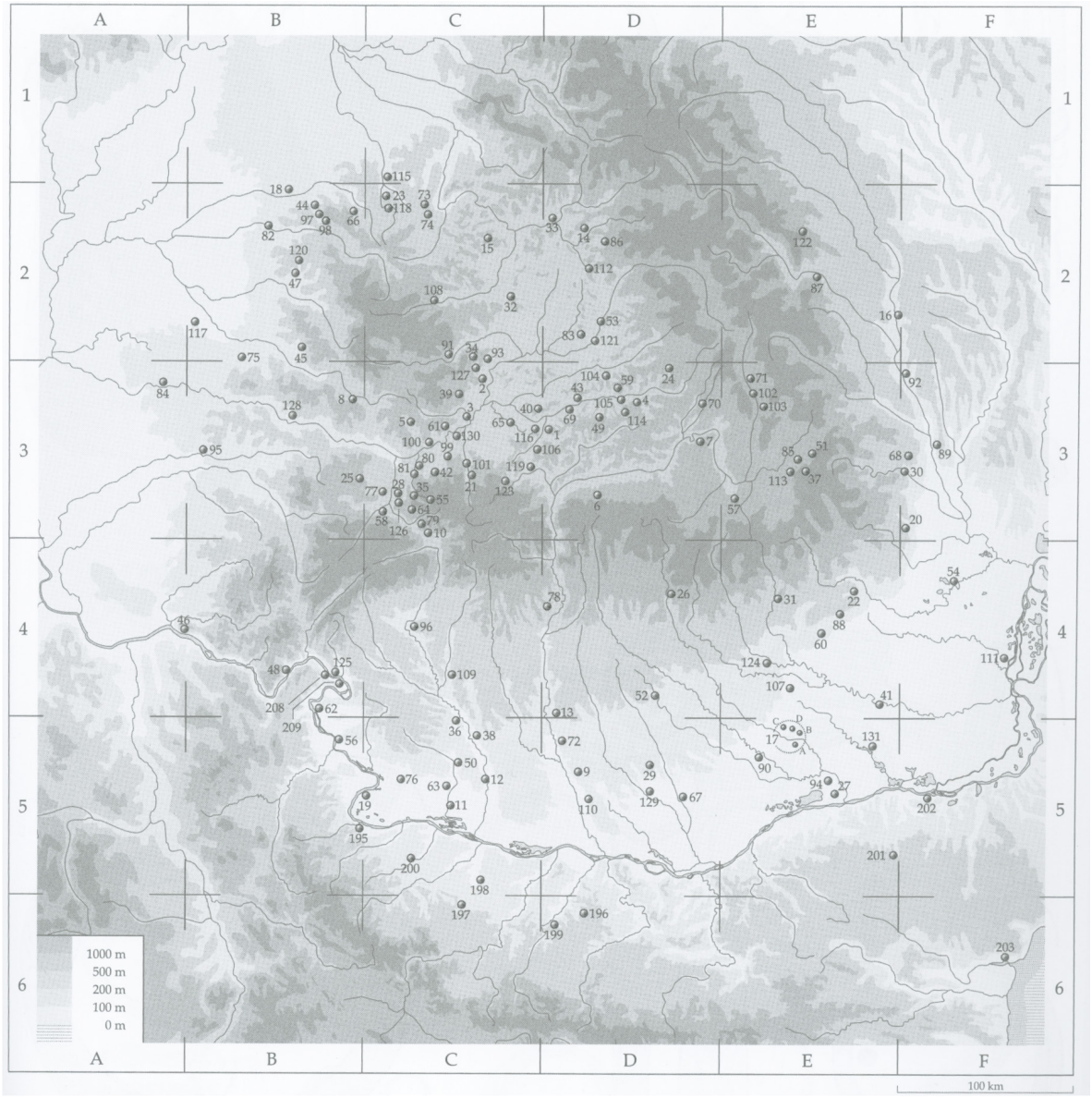

Fig. 2. Spaţiul de lucru. „Cartarea localităţilor din care provin descoperirile descoperite repertoriate" (după D. Spânu 2012, 279, pl. 1.

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surselor reproducerilor. Literatura citată. Planşe (195, începând cu pagina 279).

Lucrarea d-lui dr. Daniel Spânu este o monografie de temă – o temă de mare interes şi actualitate, mai ales de când în circuitul muzeal şi ştiinţific au intrat de relativ puţini ani şi seturile de brăţări de aur din zona Grădiştei de Munte– precum şi o încununare a unor strădanii şi preocupări care datează de cu mulţi ani. Preocupările autorului au fost în această vreme diverse, vizând mai multe alte problematici, dar au rămas mereu treze faţă de domeniul spectaculos – prin conţinut, frecvenţă şi somptuozitate – al tezaurelor de metale preţioase din Dacia preromană.

Fenomenul acesta major al civilizaţiei geto-dacice din sec. I a. Chr. – I p. Chr. face parte din caracteristicile „fondului cultural local în care au fost receptate importurile" elenistice târzii şi romane – de la veselă, la podoabe și până la o substanţială masă monetară. Este, fără îndoială, de remarcat faptul că orfevreria perioadei amintite „constituie una dintre creaţiile originale ale unui sistem cultural-ideologic, dezvoltat într-o conjunctură [...] particulară" (p. 18-19).

Autorul a căutat să adune toate informaţiile legate de obiectele de metal preţios din Dacia preromană şi zonele limitrofe şi, totodată, a filtrat de pe poziţii de critică ştiinţifică o serie de locuri comune în cercetarea arheologică şi istorică din ţara noastră. Este vorba de peste 210 descoperiri – tezaure sau piese izolate – din România, Bulgaria şi Serbia a căror frecvenţă majoritară se află în zona intracarpatică, dar cu extensii semnificative la sud sau vest de această regiune.

Fenomenul amintit – pe care autorul l-a urmărit în întregul său și nu numai în graniţele ţării noastre – este spectaculos şi „surprinzător" prin număr, inedit, valoare intrinsecă, meşteşugărească, simbolică, etc. şi apare oarecum „brusc", durând în linii mari circa un veac, începuturile sale putând fi asociate cu așa-numita „*incrementa dacorum*" din prima jumătate a sec. I a. Chr.

Dr. Daniel Spânu a urmărit în mod amănunţit tipologia și morfologia orfevreriei geto-dacice, fiind preocupat în acelaşi timp de sursele de metal preţios, de tehnicile de execuţie şi ornamentare, de tratamentul aplicat pieselor în vechime (inclusiv reparaţiile la care au fost supuse), de analiza inventarelor din tezaure, precum şi de semnificaţiile iconografice şi mitologice ale pieselor de orfevrerie.

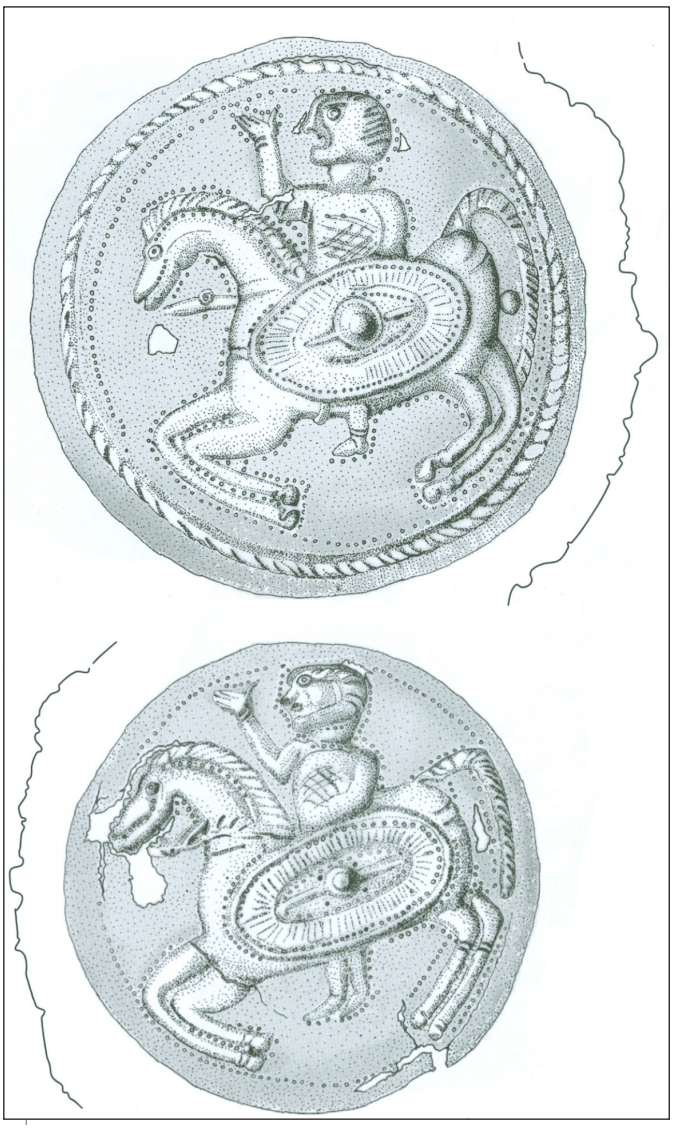

Fig. 3. Falerele „g" și „h" din tezaurul de la Lupu (după D. Spânu 2012, pl. 68).

La încheierea acestei scurte prezentări, este necesară o remarcă legată de cantitatea şi calitatea ilustraţiei, fie că e vorba de figurile din text, fie de planşele de la sfârşitul lucrării. Numeroase piese care sunt ilustrate de către autor au fost examinate nemijlocit şi desenate sau redesenate *manu propria* (fig. 3). Calitatea acestor execuţii este un model şi vorbeşte pe de-o parte de talentul său şlefuit cu mijloacele artelor frumoase, dar şi despre nivelul profund de înţelegere – până la cel mai mic amănunt – al morfologiei şi tehnicii de realizare a materialelor urmărite.

În ansamblu, mai puţin cele câteva scăpări de ordin ortografic, ortoepic sau de paginare a textului[1], lucrarea d-lui Spânu este, după părerea

[1] În ce mă privește, apreciez în mod deosebit, pe lângă nenumăratele ore, zile și luni petrecute pentru acumularea, prelucrarea și comentarea unei documentații deosebit de ample și complexe, răbdarea și talentul în constituirea părții ilustrative a

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mea, un gen de *nec plus ultra* faţă de această generoasă, complexă şi dificilă temă. O asemenea carte face cinste autorului ei şi merită pe deplin un premiu al Academiei Române. Lucrarea se va impune categoric ca o lectură obligatorie pentru oricine va dori să se apropie de acum înainte de tezaurele dacice. Aceasta este deja şi va deveni tot mai mult o lucrare „clasică" a temei respective.

lucrării. Acestea, împreună, au constituit un aliaj mai rar întâlnit care vorbește despre capacitatea autorului de a „descompune" și „recompune" piesele, tezaurele și, în general, fenomenul pe care l-a urmărit.

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NECROLOGY

TUDOR ARNĂUT, OR THE PASSION FOR ARCHAEOLOGY (1958 – 2012)

RODICA URSU NANIU

The disappearance of a person does not compare with any other life experiences. In the turmoil of a very active existence, we are caught into its whirl, imposing us a more and more alert lifestyle. Thus, we cannot find the proper time to see the existence of the people beside us (friends, colleagues), except when we have mutual interests, when we occasionally meet, or when we have common activities at the office. Just after Death takes them away from us, it seems that the time stops a little, thus making way to the memories, evocation of the gestures and words that, piece by piece, create the real image of the person who was beside us for years and whom we really understand just now, when things cannot be changed any longer. What a sad consolation…

The same feeling we all experienced when we heard the terrible news of the passing of our colleague and friend Tudor Arnăut. The mystery of death, the same as the one of life is not given to humans to be understood; but the instant death of a person who was in full ascension of his professional and scientific career shocked the entire university community, and all the people who knew him. In a moment, a number of projects and initiatives promoted by Tudor Arnăut have been crushed down, while those involved in them have suddenly found themselves in the position of missing the one who had the capacity of moving things, of establishing communication bridges, of taking the tasks to their proper end.

Maybe the best highlight of Tudor Arnăut was his ability to communicate and to convince people, to gather them around an idea, no matter if it was connected with the research, the teaching activities or the administration (in his capacity of Pro-rector of the State University of Moldova in Chişinău),

Thraco-Dacica S. N., Tomul IV-V (XXVII-XXVIII), 2012-2013, 221-226.

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as he treated each of them with the same dose of respect.

He was born on December 24 1958, in the Giurgiuleşti commune, Cahul region, in the Republic of Moldova, in a family of farmers. As his parents wished for a better fate for their children, they were all encouraged to study. Tudor Arnăut attended the local school, afterwards continuing his studies at the Pedagogical School from Cahul (1974-1978), which he graduated with Excellency, being one of the best and promising students. In 1981 he accomplished his dream of studying in one of the most prestigious universities of Republic of Moldova – the State University of Chişinău, Faculty of History, where he was accepted with very good results.

Due to his passion for archaeology, ancient history and classical languages, during the years of study (1981-1986) he specialized in ancient history and archaeology, under the coordination of the university professor Ion Niculiţă, who would later be his coordinator for the graduation thesis. Even starting from those years, he attended the archaeological excavations carried out in different sites – Hansca, Butuceni, Pojorăni, improving his skills in research, which are usually demanded from an archaeologist.

After the graduation, in 1986, he was appointed assistant at the Chair of Archaeology and Ancient History of the Faculty of History in the Republic of Moldova State University. The working capacity and sustained interest of the young assistant for the aspects of the ancient history, especially those regarding the commercial connections between the local Getae population and the Greeks in the north-west Pontic colonies made him arduously desire to deepen his university studies in an elite academic milieu, like the one existing in the Faculty of History from the *Mihail Lomonosov* State University of Moscow, Russia. The studies for this speciality would have lasted for years, but the historical events that occurred at the end of the '80s – namely the fall of the former Soviet Union – completely turned the things upside down. Everything seemed to become unchangeable. His freedom of expressing the option was valued in a doctoral stipend, offered by the Romanian State, in 1992, through which Tudor Arnăut had continued his studies at the Faculty of History within the Bucharest University.

He sustained his doctoral thesis in 1998 with *Magna cum laudae*, the title of his contribution being "*The Geto-Dacians from east of the Carpathians in the 7th-3rd c. BC, in the light of the archaeological and numismatic findings"*, coordinated by the late Romanian numismatist Constatin Preda.

The documentation stages and trainings that followed the stipend, which were carried out in different specialized institutions from Romania, Ukraine, Russia, Bulgaria, Turkey, France, Italy, helped him to reach a level of excellent knowledge in distinct fields, which he used in several courses and seminars that he held at the Faculty of History from the State University of Moldova.

There were memorable lectures of the Associate Professor Tudor Arnăut at the disciplines like the *Ancient History of the Romanian Area, Funerary Practices of the Populations in South-East Europe in the 1st Millennium BC, Sacred Spaces and Collective Memory, Colonization as a Historical Phenomenon, The History of the Ancient Orient, The History of the Ancient Greece, Numismatics, The History of the Ancient Historical Thinking, Ethnicity, Nationalism, Identity,* all proving, beyond any doubt, his vocation as a professor. He coordinated about 100 graduation theses, during the same time, teaching a large number of seminars for training the future graduating students.

With his competence and devotion for the teaching act he didn't miss any occasion of evoking the personality and contribution of those who helped him in his professional progress, thus bringing them over the years the proof of his deepest respect. Among these personalities were the university professors Ion Niculiţă, Vladimir Potlog, Mircea Babeş, Constantin Preda, Gheorghe Postică, Silvia Teodor, and academician Alexandru Vulpe. This is an attitude of high moral and spiritual substance; the one of honouring his professors, which should be a behaviour norm for any society. He also respected his disciples who, in return, offered him their devotion. This is why professor Arnăut never lacked students for the archaeological practice. A number of student generations grew on his excavation sites, some of them becoming archaeologists after graduation. What other bigger achievement could be obtained by a professor, than to see his own disciples following his path!

Yet, his greatest passion was always the archaeology. He had an innate sense for it, he could smell the earth and read it, like a book. Every time he started a surface survey, he came with "*trophies*". I have never been able to explain to myself how he could see so many things where others could not find anything and how he could be so sure when

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he was saying: "*You have no idea what is here, you will see!*" And he was never wrong! The researches carried out in the fortresses of Măşcăuţi, Potârca, Pojorani, Hansca, Saharna Mică, Stolniceni are connected with the name of Tudor Arnăut. But, behind this innate sense, it was his impressive training experience, as nothing from the literature was unknown to him. He quite instantly obtained in a rather mysterious way almost everything that was new in the field of archaeology from Romania, Russia, Ukraine, Bulgaria, thus gathering one of the most valuable libraries of ancient history and archaeology in the Republic of Moldavia. He established cooperation relations and good friendships with archaeologists from all corners of Romania, especially with those sharing the same interest - in the Getic civilization. He was respected and appreciated for his serious scientific endeavours. His printout of the doctorate thesis, "*Vestiges of the 7th-3rd centuries BC in the east of the Carpathians"* became within a short time one of the reference papers in this regard.

Between 1998 and 2006, in parallel with his activity at the Chair of Archaeology and Ancient History, he was also the manager of the Pedagogical College "Alexei Mateevici" from Chişinău. Since 2010 he was elected as a Pro-rector of the State University of Moldova, being responsible with the student activities. He was involved in several research projects, like "*Funerary practices and customs of the Thracians, in the first millennium BC"* (in collaboration with the Romanian Cultural Institute); "*Students without frontiers"* (in collaboration with the "Spiru Haret" University from Bucharest); also being part of the organizing committees for national and international conferences. His prodigious scientific activity materialized in dozens of studies and articles, monographs and reports, the last one – his habilitation thesis being programmed to be sustained in the spring of 2012. Unfortunately, it was not to be...

We are convinced that, beyond the high appreciation and controversies, the contributions of Tudor Arnăut to the understanding and clarity of several important aspects of the civilization belonging to the Septentrional Thracians, will remain real working instruments, both for his disciples and his colleagues, in the field of archaeology. Being based upon strong documentation, they offer the example of an academic research, structured upon a deep and nuanced interpretation of the data, which opened the path to new connections and influences in the cultural and chronological space that he dealt with. Moreover, the preparation and printing of his habilitation thesis is a moral duty for his colleagues and friends, same as the research completion in the archaeological site of Stolniceni. This would be a last homage that we could bring to the one who was a professor, archaeologist, colleague and friend, Tudor Arnăut, for whom the idea of life identified with the one of doing **ARCHAEOLOGY.**

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DAN BOTEZATU

(1931 – 2012)

ALEXANDRA COMŞA

On 5th of March 2012 a remarkable scientist, but also a special person past away from us. Dr. Dan Botezatu was an encyclopedic specialist, with very strong knowledge about the ancient environment, flora and fauna but also about the human beings of the past. Whenever he was asked something, with his gift of speech he could create a fascinating image about what happened in remote periods. If he was addressed by nonspecialists, he could even make a kind of captivating story that would help those people to understand things.

Given his knowledge, he could be easily distinguished from other scientists. Probably, his advantage was that he worked for some time in the Museum of National History from Iaşi. But many people had such an activity and still, they could not give so many details about one thing, without a previous documentation.

On the other hand, he was a kind and sensitive person, always willing to be close to those in need. It was not necessary to tell him that you were in a difficult situation… he would come and offer to give you a helping hand.

I met him in 1990, when, as an young anthropologist, I went to Iaşi for making a documentation and training at the Section of Anthropology, which had at that time a very strong and imposing collective of specialists, coordinated by Olga Necrasov, who made a very rigorous selection of personnel and established clear and very high standards of work for everybody. Dr. Dan Botezatu was formed under the influence of Academician Olga Necrasov who was also an anthropological school founder. Subsequently, he worked with Dr. Maria Cristescu, together with other colleagues that created together the strong team of the Section of Anthropological Studies in Iaşi. Dr. Maria Cristescu was the disciple

Thraco-Dacica S. N., Tomul IV-V (XXVII-XXVIII), 2012-2013, 227-234.

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of Academician Olga Necrasov and succeeded her at the leadership of the Section. As Academician Olga Necrasov was the first anthropologist trained as such and not dealing with this science as a secondary concern like others did, being also a good specialist in archaeozoology and very familiar with the environmental studies. This could be also an explanation why Dr. Dan Botezatu became a very well trained specialist in these fields. He was able to study both inhumed and cremated bodies. The specialists from Iaşi, as a team, including Dan Botezatu did important anthropological analyses on prehistoric necropoleis, like the large ones from Cernica (Boian Culture – Neolithic), or Truşeşti (Noua Culture – Bronze Age), but also on smaller ones, like those from Zimnicea I and II (Bronze Age). They also dealt with later cemeteries, from the Geto-Dacian, Migrations or Medieval periods. The recent anthropological inquiries, carried out in different communities, for instance the Csango population, should not be neglected as well.

The team from Iaşi tried and succeeded to make longitudinal studies that could point out the manner in which certain anthropological characters could have evolved in time.

Besides this kind of studies, they did demographic, as well as paleopathological analyses. We could say that the respective collective was not only a very active team, but also a complete one, which covered a large topic of research.

Dan Botezatu had no obligation to help me, yet, he felt whenever I was in difficulty and told me what to do, in order to make things right. He also had a special relationship with Petru Cantemir, one of his younger colleagues, in whom he trusted just like in a brother. Both of them were very joyful and always created a pleasant atmosphere. His colleague died early, in 1998 at the age of 53 years and this situation, cumulated with the death of his son, changed everything for Dan Botezatu. He got ill and in 2012 he passed away, trying to find some of his dear ones, in another world.

*

Such a personality, with very much commitment for work, cannot be left aside just after this brief presentation. Therefore, we should add here the most important moments of his life, as well as part of the literature he published. We should not forget that he also published articles regarding the recent populations, as well as paleofauna studies.

He was born in Iaşi on April 22nd, 1931, as the second son of Aurelia and Ioan Botezatu.

He graduated in 1950, from the Boys High School in Roman and afterwards, in 1954, the University “Alexandru Ioan Cuza” – Faculty of Natural Sciences. Beginning with 1955 he worked at the Museum of Natural Sciences in Iaşi and since 1961 he became a junior researcher at the Branch of the Romanian Academy Iaşi – Section of Anthropological Studies.

In 1965 he was promoted as a 3rd degree researcher, a very unjust position for his knowledge and competence.

In April 1998 he sustained his doctoral thesis and in 1999 he retired.

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MIRCEA PETRESCU-DÎMBOVIŢA

(1915–2013)

PETRE ROMAN

Another personality of the Romanian science needs to be commemorated.

In his long lasting life, he took the steps of the education (as a pupil, student, doctorate candidate, university professor, doctorate coordinator) and of the Academic life (correspondent and full member of the Romanian Academy, honorary member of different prestigious international institutions).

He left us as heritage a large number of field investigations, an impressive quantity of studies, articles and printed volumes.

He created and led museums, research, didactic, academic institutions.

He organized and attended numerous scientific meetings in Romania and abroad, in Europe, Asia, America.

He supported the useful parts of the people and rejected the useless ones, which could hamper, or damage valuable projects.

With this opportunity, we will point out his involvement in Thracological matters. Ever since the Romanian Institute of Thracology was established (1979), he was elected as a member of the Committee of the Scientific Council and President of the Iaşi Branch of this institute.

Between the years 1990–1994 he was an honorary director of the Institute of Thracology. Before and afterwards Academician Mircea Petrescu-Dîmboviţa was present at international congresses and symposia of Thracology, presenting scientific papers that were highly appreciated and published in their proceedings. Thus, at the 2nd Congress of Thracology, that took place in September 1976 in Bucharest, he presented a topic entitled "*The contribution of the archaeological research in the history of the Thracians North of the Danube in the Bronze Age and at the beginning of the Iron Ages*".

At the 3rd Congress, held in Vienna in June 1980, he analysed "*The Problem of the synchronisms between the bronze depositions and the contemporary cultures in the Carpathian-Danubian-Pontic area"*.

The last congress of Thracology which he had attended was the 7th one, held in Constanţa – Mangalia – Tulcea, in May 1996). There he presented a topic with the title "*Some issues regarding the bronze metallurgy in the works of Vasile Pârvan"*.

The participation of Prof. M. Petrescu-Dîmboviţa at the symposiums of Thracology was also a frequent one. We enlist here the 12th Symposium of Thracology held in Tulcea, in September 1989; the 13th one (international) at Satu Mare (September 1990); the 14th one (international)

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at Băile Herculane (1992); The Yugoslavian-Romanian Symposium from Kladovo – Drobeta – Turnu Severin – Vršac (September – October 1998), the International Colloquium from Iaşi – Piatra Neamţ (November 1994).

We should also mention the Symposium from Plovdiv-Bulgaria (October 1986) where he sustained a topic about "*The first stages of the Thracians genesis in the Carpathian-Danubian-Pontic area*"; as well at the Romanian-Yugoslavian colloquium from 1996 held at Kladovo – Drobeta Tr. Severin – Vršac with the topic regarding the second half of the 1st millennium BC.

We give here also a quotation from his volume "*Amintirile unui arheolog*" (*Memories of An Archaeologist*), Piatra Neamţ 2006, 113: "*Yet, unfortunately, after 2001, despite its wonderful results, well appreciated on a national and international scale, the Romanian Institute of Thracology, that was led with competence and much enthusiasm by Professor Petre Roman, has been destroyed. We ourselves, by papers addressed to the specialized organisms at that date, we tried to show the injustice of this solution that resulted in the dismembering of this prestigious research institute. Still, we hope that in the future – according to our opinion – the disappearance of this institution will be objectively analysed, being resumed the research and collaboration on the advanced topics of Thracology, including also those in the region of the Iron Gates*"…

Amongst of more than 200 protesting letters which came from Japan and up to Northern America, we will present here just one, initiated by Professor Mircea Petrescu-Dîmboviţa (April 2003). It pointed out the personality of the specialist that we commemorate today.

Petre Roman

To Academician Eugen Simion
President of the Romanian Academy

7.04.2003

DEAR MR. PRESIDENT,

Based upon the direct collaborations with the National Romanian Institute of Thracology or on behalf of some distinguished academic personalities, like: Ion Coteanu, Ştefan Pascu, Olga Necrasov, Gheorghe Focşa, who were members in its Scientific Council, coordinating sections of this Institute and taking into consideration:

- the presence of some European academic personalities among the honored members of the Institute;
- the messages transmitted to you by members of some European Academies;
- the thematic (sections) and territorial (branches) structure of this scientific construction;
- the value and prestige in Romania and abroad of its achievements;
- its integration into the Central and South-East European programs, with Republic of Moldova, Ukraine and Serbia,

we express the opinion that the solution advanced by the Ministry of Education and Research given by a HG is unfair, very damaging and will be further submitted to embarrassing evaluations that would also involve the Romanian Academy.

This is the reason why, we would kindly ask you to reanalyse the case, together with representatives established by the National Romanian Institute of Thracology and to promote either its annulation, or the change of the HG, in the sense that the National Romanian Institute of Thracology should be admitted in the structures of the Academy just as a self standing unit or, in an extreme situation, we would suggest an association with the Institute of South-East European Studies, which could be renamed as the National Institute of South-East European and Thracian Studies.

We express our conviction that our message would be carefully examined by you.

Academician Professor univ. Dr. Mircea Petrescu-Dîmboviţa - signature
Corresponding member of the Romanian Academy Prof. univ. Dr. Alexandru Zub - signature
Corresponding member of the Romanian Academy Prof. univ. Dr. Victor Spinei - signature

Translation from Romanian language by Alexandra Comşa, 235-236.
For the publications of M. Petrescu-Dîmboviţa see also Studia Antiqua et Arheologica 7, 2000, 8-20.

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